



#### NAVAL AIR STATION FORT WORTH JRB CARSWELL FIELD TEXAS

### ADMINISTRATIVE RECORD COVER SHEET

AR File Number 724

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## FINAL SITE INVESTIGATION REPORT AREA OF CONCERN 19 NAS FORT WORTH JRB, TEXAS



#### Prepared for

U.S. Air Force Center for Environmental Excellence Brooks AFB, Texas

Contract Number F41624-95-D-8005

Prepared by

HydroGeoLogic, Inc. 1155 Herndon Parkway, Suite 900 Herndon, VA 20170

April 2002

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30 April, 2002

MEMORANDUM FOR RAY RISNER (TNRCC)

FROM: HQ AFCEE/ERD

3207 Sidney Brooks

Brooks AFB, TX 78235-5344

SUBJECT: Naval Air Station Joint Reserve Base

Formerly Carswell AFB

TNRCC Solid Waste Registration No. 65004
TNRCC Hazardous Waste Permit No. HW-50289

EPA ID No. TX0571924042

Final Site Investigation Report, AOC 19

Dear Mr. Risner,

Two copies (one original and one copy) of the Final Site Investigation Report requesting closure of Area of Concern 19 are enclosed for your review per the TNRCC RCRA permit No. HW-50289 for NAS Fort Worth JRB. Additional copies of the Final Report are also being sent to the TNRCC Region 4 Office and to EPA Region 6.

Should you have any questions regarding this letter, please contact me at (210) 536-5290.

Sincerely,

Michael R. Dodyk, P.E. Restoration Team Chief

NAS Fort Worth JRB



cc:

EPA Region VI Mr. Gary W. Miller 1445 Ross Avenue, Suite 1200 Dallas, TX 75202-2733

TNRCC Region 4 Office Mr. Sam Barrett, Waste Program Manager 1101 East Arkansas Lane Arlington, TX 76010

TNRCC Region 4 Office (letter only)
Mr. Tim Sewell,
1101 East Arkansas Lane
Arlington, TX 76010

HQ AFCEE/ERD Mr. Don Ficklen 3207 Sidney Brooks Brooks AFB, TX 78235-5344

Booz-Allen & Hamilton Ms. Audrie Medina 300 Convent Street, Suite 1250 San Antonio, TX 78205

## RESPONSES TO REVIEW COMMENTS DRAFT SITE INVESTIGATION REPORT AREA OF CONCERN 19, NAVAL AIR STATION JOINT RESERVE BASE, FORT WORTH, TEXAS

Comment 1

Page 1-1, Section 1.0, 2<sup>nd</sup> sentence. Please insert "as a voluntary action

by the Air Force and was" after "The SI was conducted."

Response

This change has been made as requested.

Comment 2

Page 1-3, Section 1.3, 4<sup>th</sup> paragraph, 4<sup>th</sup> sentence. Please explain the

source(s) of the "existing medium specific concentrations (MSCs)."

Response

The sentence has been revised to read: "All analyte concentrations above the applicable RRS 1 value were compared to the applicable RRS 2 values, which are the medium-specific concentrations (MSCs) presented in 30 TAC §335.368. Those concentrations above RRS 2

pose a potential threat to shallow groundwater."

Comment 3

Page 1-3, Section 1.3, 5th paragraph, 1st sentence. Please use either

"Standard 2" or "RRS 2" consistently throughout the document.

Response

The explanation of RRS 1, RRS 2, Standard 1, Standard 2, and Standard 3 has been expanded in Section 1.3, and the document has been reviewed to ensure that the use of these terms is correct and

consistent.

Comment 4

Page 1-4, Section 1.3, Please consider presenting the last two sentences

in Section 4.0.

Response

The following text has been added as the 6<sup>th</sup> sentence of the 4<sup>th</sup> paragraph on page 1-3: "In some cases, a site-specific soil MSC was developed for an analyte by performing the synthetic precipitation leaching procedure (SPLP) and comparing the analytical results of the leachate to the applicable groundwater MSC (see Section 4.0)."

Comment 5

Page N/A, Section Figure 1.2. Please clearly indicate that the portion of solid waste management unit (SWMU) 25 that is across Perimeter Road is a part of SWMU 25. Also, include SWMU numbers for all SWMUs shown on the figure.

Response

Both portions of SWMU 25 have been indicated on the figure, and all SWMUs and AOCs shown on this figure have been identified.

Comment 6

Page N/A, Section Figure 2.1. Please add a legend to the figure that explains the various shadings on the drawing.

Response

The shading on this figure has been reproduced from the original USGS topological map; therefore, no change has been made.

Comment 7

Page 3-3, Section 3.4.1. Please change "Volatile" to "volatile" and "Semivolatile" to "semivolatile" here and throughout the document.

Response

The capitalization of these words has been corrected.

Comment 8

Page 3-4, Section 3.4.2.3. It is recommended that the section be reviewed for discrepancies in the total number of Phase II borings and monitoring wells.

Response

This section has been reviewed and discrepancies have been corrected. This section has also been revised to improve clarity.

Comment 9

Page 3-4, Section 3.4.2.3. 1<sup>st</sup> paragraph, 2<sup>nd</sup> sentence. Please reword the sentence for clarity.

Response

This sentence (as well as several subsequent sentences) has been revised for clarity.

Comment 10

Page 3-4, Section 3.4.2.3. 1<sup>st</sup> paragraph, 3<sup>rd</sup> sentence. Please indicate whether the Work Plan was revised to reflect the expanded scope of work and, if not, indicate whether AFCEE approval was obtained for the increased scope.

Response The original Work Plan Addendum was not revised. The report text

has been edited to indicate that the additional field work was performed after consultation with AFCEE and with AFCEE's

concurrence.

Comment 11 Page 3-4, Section N/A. Footnote 4 at the bottom of the page. Please

insert "low TCE readings in" between "on" and "the."

Response This footnote has been revised to include this information.

Comment 12 Page 3-5, Section 3.4.2.3. 4<sup>th</sup> bullet. Please change "SW7471" to

"SW7471A" and change "Amercury" to "mercury."

Response This change has been made as requested.

Comment 13 Page 3-5, 3.4.2.3, 1<sup>st</sup> paragraph on the page, 5<sup>th</sup> sentence. Please insert

"analysis of " between "of" and "the."

Response The text has been changed to read "Based on the analytical results of

the sample collected from ..."

Comment 14 Page 3-6, Section 3.4.2.3. 2nd paragraph on the page, 2<sup>nd</sup> sentence.

Please rewrite the beginning of the sentence to read "A sample was

collected from boring BHGLAOC1907 in August 2001."

Response This sentence has been divided into two sentences that now read

"One of the twelve Phase II borings, BHGLAOC1907, was advanced for confirmation purposes. The 10-foot interval of this confirmation boring was sampled in August 2001 in order to confirm a TCE

detection in the 10-foot interval of BHGLAOC1901."

Comment 15 Page 3-6, Section 3.4.2.4. 1st paragraph, 2nd sentence. Please show the

piles of golf course construction debris on Figure 3.1.

Response The debris pile is now shown on Figure 3.1.

Comment 16 Page N/A, Figure 3.1. Please crosshatch the area that is part of both

AOC 19 and SWMU 25 (also pertains to other figures). Please indicate

that the blue hash marks indicate an aqueduct.

Response SWMU 25 is now indicated by cross-hatching in the manner similar

to that of Figure 6.1. Both figure legends now show that the hash

marks indicate an underground aqueduct.

Comment 17 Page 4-1, Section 4.0. 2<sup>nd</sup> paragraph, 1<sup>st</sup> sentence. Please insert a

comma after "previously."

Response This change has been made as requested.

Comment 18 Page 4-1, Section 4.0. 2<sup>nd</sup> paragraph, 3rd sentence. Please consider

revising the sentence to read "Furthermore, all analytical results

exceeding RRS 1 levels were compared to available MSCs."

Response This change has been made as requested.

Comment 19 Page 4-1, Section 4.0. 3<sup>rd</sup> paragraph, 1<sup>st</sup> sentence. Please consider

revising this sentence if synthetic precipitation leaching procedure (SPLP) analysis was run on any samples for which there was no existing

MSC.

Response Standard 2 detections of analytes for which there are no RRS 2

values did not trigger SPLP extraction and analysis. No changes

have been made.

Comment 20 Page 4-1, Section 4.1. 1<sup>st</sup> paragraph, last sentence. Please include the

date that the RCRA Facility Investigation (RFI) was conducted at SWMU

25/Landfill 8.

Response The dates of RFI activities conducted at SWMU 25/Landfill 8 have

been added to footnote 6 on page 4-1.

Comment 21 Page 4-2, Section 4.1. 1<sup>st</sup> paragraph, 2<sup>nd</sup> sentence. Please include the

waste manifest for the metal debris, if available, as an Appendix.

Response No manifests were generated for this debris. The report has been

revised to indicate that the metal debris was determined to be non-

hazardous.

q

Page 4-3, Section 4.1. 2<sup>rd</sup> paragraph on the page, last sentence. Please Comment 22

replace "native soil" with "the excavated soil."

This change has been made as requested. Response

Comment 23 Page 4-4, Section 4.2. 1st paragraph, 1st sentence. Please reference

Figure 4.1 at the end of the sentence.

Response This change has been made as requested.

Comment 24 Page 4-4, Section 4.2. 1st paragraph, 3rd sentence. Please locate the

bermed area on the Figure 4.1.

Response This change has been made as requested.

Comment 25 Page 4-4, Section 4.2. 1st paragraph, last sentence. Please indicate the

contaminants for which delineation is necessary.

Response The identification of contaminants for which delineation was

necessary is a principal topic of Section 3.4.2.3, and this section is

now referenced in Section 4.2.

Page 4-7, Section 4.4. 2<sup>nd</sup> paragraph on the page, 2<sup>nd</sup> sentence. Please Comment 26

spell out the acronym "MDL" and include it in the "Acronyms" section.

The phrase "above the MDL" is redundant and has been removed Response

from this sentence.

Comment 27 Page 4-11, Table 4.2. Please define "GW-Ind" in the "Notes" section

below the table.

Response This change has been made as requested.

Comment 28 Page 4-12, Table 4.3. Please globally (for all tables) remove the term

"analyzed for, but" from the "Notes" section.

Response This change has been made as requested. Comment 29 Page 4-16, Table 4.4. Please remove the "2" following "NA = not

analyzed." Also, please use capitalization consistently in the "Notes" sections of the tables (e.g., text following "NA" begins with a lowercase

letter, but text following "F" begins with an uppercase letter).

Response This change has been made as requested. The table notes have been

edited for consistency.

Comment 30 Page N/A, Figure 4.1. Please label Perimeter Road in the figure.

Response This change has been made as requested.

Comment 31 Page N/A, Figure 4.3. Please describe the metal object in the right

pictures in the appropriate section of the text.

Response The text (page 4-2, third paragraph) describing the anomaly at

THGLAOC1902 has been revised to include both metal objects

shown in Figure 4.3.

Comment 32 Page N/A, Figure 4.8. Please consider indicating the extent of

contamination delineation. Also, the legend points out that yellow shading indicates "proposed samples," but there are no proposed

samples. Please clarify.

Response The text "proposed samples and" has been removed from the key for

yellow headers. The extent of delineation for VOCs and SVOCs are depicted as the metes and bounds shown in Figure 6.1, and have not

been placed on Figure 4.8.

Comment 33 Page 5-1, Section 5.3. Please reference Figure 4.8 in this section.

Response This change has been made as requested.

Comment 34 Page 6-1, Section 6.0. 2<sup>nd</sup> paragraph, 1<sup>st</sup> sentence. Please insert

"activities at" between "that" and "AOC 19."

Response This change has been made as requested, with the addition of the

word "former" before "activities".

Comment 35 Page 6-1, Section 6.0. 2<sup>nd</sup> paragraph, 2<sup>nd</sup> sentence. Please insert "and delineated" between "identified" and "at."

Response An additional sentence was added after the referenced sentence: "The SVOCs in this section of the site have been delineated."

Comment 36 Page 6-1, Section 6.0. 4th paragraph, 2nd sentence. Please insert a

comma after the word "language."

Response This change has been made as requested.

Comment 37 Page N/A, Appendix E. The "Notes" sections of the tables contain a description of a "UJ" flag, but it does not appear that the "UJ" flag is used in the table. Typically, a result will be flagged as "U" or "J," but not both. Please clarify.

Response

UJ qualifiers are used in association with some AOC 19 data per the approved QAPP (e.g., the antimony result for BHGLAOC1903 00 ft on page E1-15). The definitions of data qualifiers in Appendix E have been edited for accuracy and clarity.

Comment 38

Page N/A, Appendix H. Please ensure that the metes and bounds legal description is included in the next version of this report. Make the signature for Michael Dodyk, keeping the same address for AFCEE. Please change the date portion of the signature blocks to "2002."

Response The legal description for metes and bounds at AOC 19 has been added to this report. The other changes have been made as requested.

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#### **PREFACE**

This document contains the Final Site Investigation (SI) Report for area of concern (AOC) 19 at the Naval Air Station (NAS) Fort Worth Joint Reserve Base (JRB), Texas.

HydroGeoLogic, Inc. (HydroGeoLogic) prepared this report under contract to the U.S. Air Force (USAF) Center for Environmental Excellence (AFCEE), Contract No. F41624-95-D-8005, Delivery Order No. 0026, in support of the Air Force Installation Restoration Program (IRP).

Responsible key HydroGeoLogic personnel are as follows:

James P. Costello, P.G.

Program Manager

Miguette E. Rochford, P.G.

Deputy Program Manager / Project Manager

This contract will be administered by the Defense Contract Management Command (DCMC), 10500 Battleview Parkway, Suite 200, Manassas, Virginia 22110. The Contracting Officer is Mr. David Miller. The Contracting Officer's Representative is Mr. Don Ficklen (210/536-5290), representing the AFCEE Environmental Restoration Division (ERD), located at Headquarters AFCEE, 3207 Sidney Brooks, Brooks Air Force Base (AFB), Texas 78235-5363.

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AFB Air Force Base

AFCEE U.S. Air Force Center for Environmental Excellence

AFP 4 Air Force Plant 4

AGE aerospace ground equipment

AOC area of concern

ASTM American Society for Testing and Materials

bgs below ground surface

BTEX benzene, toluene, ethylbenzene, and xylenes

CERCLA Comprehensive Environmental Response, Compensation,

and Liability Act

CFR Code of Federal Regulations
COPCs contaminants of potential concern

cm/sec centimeters per second

DCMC Defense Contract Management Command

DPT direct push technology
DQE data quality evaluation

EDD electronic data deliverable

EM electromagnetic

ERA Environmental Restoration Account ERD Environmental Restoration Division

ERPIMS Environmental Resources Program Information Management

System

ESE Environmental Science and Engineering, Inc.

ft/d feet per day

°F degrees Fahrenheit

gpd/ft<sup>2</sup> gallons per day per square foot

GSAP Groundwater Sampling and Analysis Program

HSA hollow stem auger
HW hazardous waste
HydroGeoLogic HydroGeoLogic, Inc.

IRA Interim Remedial Action

IRP Installation Restoration Program

IT International Technologies Corporation

#### LIST OF ACRONYMS AND ABBREVIATIONS (continued)

JRB Joint Reserve Base

LCS laboratory control sample

mg/kg milligrams per kilogram
MQL method quantitation limit
MSC medium-specific concentration
MS/MSD matrix spike/matrix spike duplicate

NAS Naval Air Station
NFA no further action

NGVD National Geodetic Vertical Datum

NPDES National Pollution Discharge Elimination System

NPL National Priority List

OVM organic vapor monitor
OWS oil/water separator

PAH polynuclear aromatic hydrocarbon

OAPP quality assurance project plan

QA quality assurance QC quality control

RCRA Resource Conservation and Recovery Act

RFI RCRA Facility Investigation RRS risk reduction standard

SDG sample delivery group SI Site Investigation

SPLP synthetic precipitation leaching procedure

SVOC semivolatile organic compound SWMU solid waste management unit

TAC Texas Administrative Code

TCE trichloroethene

TNRCC Texas Natural Resource Conservation Commission

TWC Texas Water Commission

USAF U.S. Air Force

USEPA U.S. Environmental Protection Agency

USGS U.S. Geological Survey

#### LIST OF ACRONYMS AND ABBREVIATIONS (continued)

VOC volatile organic compound

WP Work Plan

WPA Work Plan Addendum

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# TAB

SECTION 1.0

#### FINAL SITE INVESTIGATION REPORT AREA OF CONCERN 19 NAS FORT WORTH JRB, TEXAS

#### 1.0 INTRODUCTION

The Air Force Center for Environmental Excellence (AFCEE) contracted HydroGeoLogic, Inc. (HydroGeoLogic) to perform a Site Investigation (SI) at Area of Concern (AOC) 19 located at Naval Air Station (NAS) Fort Worth Joint Reserve Base (JRB), Texas (formerly Carswell Air Force Base [AFB]). This SI was conducted as a voluntary action by the Air Force and was based on historic aerial photographic evidence that suggested that possible fire training activities had occurred at this location. The investigation was conducted under the auspices of, but not at the request of, the Texas Natural Resource Conservation Commission (TNRCC) to determine whether any hazardous constituents had been released into the environment from AOC 19. The first phase of the SI field work was conducted in May 2000. Based on the results of the Phase I investigation, further investigation at AOC 19 was The second phase of the SI was conducted in 2001. The results of field investigation activities at AOC 19 revealed some evidence of release to soils at AOC 19; however analytical results indicate that this release poses no threat to human health or the environment. Based on this information, no further action (NFA) is warranted and AOC 19 is recommended for closure under TNRCC Risk Reduction Standard 2 (RRS 2) (30 Texas Administrative Code [TAC] 335.554).

#### 1.1 PROJECT BACKGROUND

Carswell AFB was officially closed on September 30, 1993. A significant portion of the former base, now known as NAS Fort Worth JRB, has been transferred from the U.S. Air Force (USAF) to U.S. Navy management. Before complete property transfer can be accomplished, required environmental investigations of potential contamination related to USAF activities occurring prior to September 30, 1993 on NAS Fort Worth JRB property are to be completed, and contaminated sites remediated.

On February 7, 1991, the former Carswell AFB (NAS Fort Worth JRB) was issued a Resource Conservation and Recovery Act (RCRA) hazardous waste (HW) permit (HW-50289) by the Texas Water Commission (TWC). This permit requires a RCRA Facilities Investigation (RFI) of all solid waste management units (SWMUs) and AOCs listed in Permit Provision VIII, as well as those SWMUs and AOCs subsequently added to the list, in order to determine if any of the hazardous constituents listed in 40 Code of Federal Regulations (CFR) Part 264, Appendix IX have been released into the environment.

In accordance with permit HW-50289, an RFI/SI was conducted at four SWMUs and three AOCs at NAS Fort Worth JRB in May 2000 (HydroGeoLogic, 2000a). The SWMUs and AOCs included in the RFI/SI served mainly as fire training areas, suspected former landfills, and a storm water drainage system. The AOCs included in the SI are not listed in permit HW-50289, nor were they added at a later date. The SI was performed as a proactive measure under the initiative and direction of AFCEE.

The initial phase of the RFI/SI was conducted at the subject SWMUs and AOCs during May 2000, in an effort to obtain closure under the TNRCC RRS program. As a result of the initial field investigation AOCs 17 and 18 received closure under RRS 1 in a letter from the TNRCC dated March 7, 2001. The remaining five of the seven sites required further investigation and/or remediation before closure could be requested. Consequently, a Phase II investigation was conducted at SWMUs 19, 20, 21, and 53, and AOC 19 in 2001 (HydroGeoLogic, 2000b) SWMU 53 received closure under RRS 1 by the TNRCC in a letter dated July 18, 2001 Investigations continue at SWMUs 19, 20, and 21, the results of which will be presented under a separate RFI report at a later date. The remaining site, AOC 19, is the subject of this SI Report.

This SI Report demonstrates that AOC 19 poses no significant risk to human health or the environment and provides justification for NFA and closure under RRS 2 for soil. This investigation was managed by the USAF under the Environmental Restoration Account (ERA). The lead regulatory agency that governs this SI and closure of this site is the TNRCC.

#### 1.2 SITE IDENTIFICATION AND DESCRIPTION

The area of interest for this SI Report is AOC 19 located on the NAS Fort Worth JRB installation. AOC 19 was one of three AOCs identified in the February 17, 1998, letter from HydroGeoLogic to AFCEE detailing findings from historic aerial photographs (Appendix A). The location of AOC 19 in relation to the base is presented on Figure 1.1.

As illustrated in Figure 1.1, AOC 19 is located south of taxiway Charlie, and adjacent to the base boundary. Activity at this site was identified on aerial photographs of Carswell AFB during the period of February 3, 1954 through August 22, 1962 (U.S. Geological Survey [USGS], 1954; National Archives, 1962). Figure 1.2 shows the current location of AOC 19 superimposed on a historical aerial photograph.

The operational history of AOC 19 is unknown. However, as the site was suspected to have operated as a fire training area during the 1950s and early 1960s, wastes received may have consisted of various waste oils, recovered fuels, and spent solvents and cleaners. Currently, the AOC 19 area is covered by grass, with a bermed area at the north and partially down the western boundary of the site. Current photographs of AOC 19 are shown in Figure 1.3. A fence marks the NAS Fort Worth JRB boundary at the south and eastern boundaries of AOC 19, with an escarpment immediately to the south of AOC 19 leading into Farmers Branch Creek. Immediately east and adjacent to AOC 19 is the Carswell golf course. The western

portion of AOC 19 (approximately one-third of AOC 19's area) overlaps SWMU 25/Landfill 8 (Figure 1.3). SWMU 25/Landfill 8 received closure in June 2001 under RRS 2.

#### 1.3 REGULATORY REQUIREMENTS

SI field activities were initiated at AOC 19 in May 2000, and continued through 2001. Although AOC 19 is not a RCRA-permitted site, the SI was designed to meet the requirements of Provision VIII of RCRA permit HW-50289. The RFI/SI Work Plans (WPs) and this SI Report have been prepared using guidance documents from the Installation Restoration Program (IRP), RCRA, the U.S. Environmental Protection Agency (USEPA), and the TNRCC RRS program.

Phase I of this SI was conducted in accordance with the RFI/SI WPs prepared by HydroGeoLogic dated April 2000 (HydroGeoLogic, 2000a). The RFI/SI WPs contain the Field Sampling Plan, which was followed during all sampling activities. Phase II of this SI was conducted in accordance with the Final Phase II RFI/SI Work Plans Addendum (WPA) prepared by HydroGeoLogic dated November 2000 (HydroGeoLogic, 2000b). Exploratory excavation activities were performed in accordance with the Final Excavation Work Plan for SWMUs 19 and 64, and AOC 19 (HydroGeoLogic, 2001a). In addition, the 2000 Basewide Quality Assurance Project Plan (QAPP) was used as guidance for managing specific quality assurance (QA) and quality control (QC) procedures as well as analytical data generated from the RFI and SI. Analytical data generation and assessment were designed to achieve data quality goals in accordance with the 2000 Basewide QAPP (HydroGeoLogic, 2000c).

The overall objective of the RFI/SI is to obtain closure of the subject SWMUs and AOCs under the guidelines of the TNRCC RRS program. An overview of the RRS program is presented in Section 4.1 of the RFI/SI WPs (HydroGeoLogic, 2000a).

To determine if a release has occurred at AOC 19, the results from site samples were compared to predetermined RRS 1 values. For inorganic constituents, the RRS 1 values were obtained from the base-specific background values for surface and subsurface soils as presented in the Final Basewide Background Study (Jacobs, 1998). For organic analytes, RRS 1 values were determined using compound-specific method quantitation limits (MQLs), as defined in the TNRCC Interoffice Consistency Memorandum (TNRCC, 1998a) and its Erratum Sheet (TNRCC, 1998b). All analyte concentrations above the applicable RRS 1 value were compared to the applicable RRS 2 values, which are the medium-specific concentrations (MSCs) presented in 30 TAC §335.368. Those concentrations above RRS 2 pose a potential threat to shallow groundwater. In some cases, a site-specific soil MSC was developed for an analyte by performing the synthetic precipitation leaching procedure (SPLP) and comparing the analytical results of the leachate to the applicable groundwater MSC (see Section 4.0). Note that analyte concentrations at or below the RRS 1 value are referred to as Standard 1 concentrations, analyte concentrations above the RRS 1 value and at or below the RRS 2 value are referred to as Standard 2 concentrations, and analyte concentrations above the RRS 2 value are referred to as Standard 3 concentrations.

Closure may be requested under the provisions of RRS 2 when it is established that the subject site does not contain contaminant concentrations greater than RRS 2 in any contaminated media In addition, contamination must be delineated to Standard 1 concentrations. Attainment of closure under RRS 2 is demonstrated by sufficient sample collection and analysis from the contaminated media of concern using the procedures outlined in Subchapter S of the TNRCC Risk Reduction Rules and the TNRCC Interoffice Memorandum. A document stating the responsible persons intention to fulfill deed certification requirements outlined in subsection 335.560 of the Risk Reduction Rules, Subchapter S must also be prepared and approved.

Evaluation of the Phase I and II SI results against the above criteria indicated that there may be a release to the soils at AOC 19. This potential release has been delineated and poses no significant risk to human health or the environment. As a result, AOC 19 is recommended for closure under Standard 2 (RRS 2).

#### 1.4 **INVESTIGATION STRATEGY**

The SI was designed and conducted to achieve the following objectives:

- Determine if a release from AOC 19 has occurred.
- Characterize the nature and extent of any contamination encountered.
- Utilize the Synthetic Precipitation Leaching Procedure (SPLP) to provide site-specific MSCs, if necessary.

Field tasks used to characterize AOC 19 included the advancement of soil borings, conducting a geophysical survey, excavation of geophysical anomalies, monitoring well installation, and groundwater monitoring.

During Phase I of the SI, a total of 4 continuous core characterization soil borings were advanced using direct push technology (DPT) within the boundaries of AOC 19. Soil samples were collected from each characterization soil boring in 5-foot intervals from the ground surface to the top of the water table or refusal. This soil sampling method was used to determine the lithology of native soils and the nature and extent of any surface and subsurface contamination at AOC 19.

During Phase II of the SI a geophysical survey was conducted at AOC 19. Following the geophysical survey, exploratory excavations and confirmation soil sampling were conducted to investigate the potential existence of subsurface anomalies at the site. geophysical activities, additional characterization soil borings along with delineation borings were advanced at the site. These borings provided additional site data to confirm Phase I detections or to delineate specific contaminants of potential concern (COPCs) to RRS 1 concentrations. Phase II delineation and conformation soil samples were collected at the depth intervals associated with the corresponding Phase I detections.

Also during Phase II of the SI, three monitoring wells were installed using a hollow-stem auger (HSA). Soil samples were collected during the installation of each monitoring well and analyzed for COPCs associated with Phase I detections. Three rounds of groundwater samples were collected from both new and existing wells at the site. Groundwater samples were analyzed for those COPCs identified in the Phase I soils.

As previously noted, AOC 19 was identified as a potential former fire training area by aerial photo interpretation only. No actual records of fire training activities at AOC 19 were confirmed. In order to determine if AOC 19 presents a threat to human health or the environment, essential information regarding the site was obtained. This information includes:

- The nature of wastes potentially generated at AOC 19.
- The lithology of soils to the top of the water table or refusal beneath AOC 19.
- An assessment of potential contaminant impacts on the quality of soil and groundwater within and around AOC 19.

#### 1.5 DATA QUALITY OBJECTIVES

The data generated by this project are of sufficient quality and quantity to meet the overall project objective to request closure of AOC 19 under the TNRCC RRS program. Data from the following categories were required for this study:

Site Characterization - Data were used to evaluate physical and chemical properties of soil and groundwater. The data were also used to characterize the nature and extent of any contaminants detected.

Health and Safety - Data were used to establish the level of protection needed for the sampling team and other site-related personnel. These data were gathered by the use of organic vapor monitors (OVMs) during intrusive activities.

A combination of screening level data and definitive level data was used during this SI. Health and safety data were collected as screening data. All soil samples were analyzed following USEPA SW-846 protocols. The definitions of screening data and definitive data, as established by the <u>Data Quality Objectives Process for Superfund Interim Final Guidance</u> (USEPA/540/G-93/071, 1993) are described below:

Screening Data with Definitive Confirmation - Screening data can be generated by rapid, less precise methods of analysis with less rigorous sample preparation. Sample preparation steps may be restricted to simple procedures such as dilution with a solvent, instead of elaborate extraction/digestion and cleanup. Screening data provides analyte identification and quantification. Although the quantification may be determined using analytical methods with QA/QC procedures and criteria associated with definitive data,

screening data without associated confirmation data are not considered to be data of known quality.

• <u>Definitive Data</u> - Definitive data were generated using rigorous analytical criteria, such as approved USEPA reference methods. Data are analyte-specific, with confirmation of analyte identity and concentration. These methods produce tangible raw data (e.g., chromatograms, spectra, digital values) in the form of paper printouts or computer-generated electronic files. Data may be generated at the site or at an off-site location, as long as the QA/QC requirements are satisfied. For the data to be definitive, either analytical or total measurement error must be determined.

The methods of analysis selected for samples collected from NAS Fort Worth JRB produced screening as well as definitive data. The data generated by the laboratory analysis of samples were sufficiently sensitive to allow comparison of the results to the TNRCC RRS. The 2000 Basewide QAPP (HydroGeoLogic, 2000c) describes each method that was performed as part of the investigation and outlines the QA measures followed by the contract laboratory. A data quality assessment of the analytical data collected during the AOC 19 SI is presented as Appendix B.

#### 1.6 REPORT ORGANIZATION

The remainder of this document is divided into the following sections:

Section 2.0 summarizes the installation and site-specific environmental settings for this SI.

Section 3.0 summarizes previous investigations as well as the activities that were conducted during this SI.

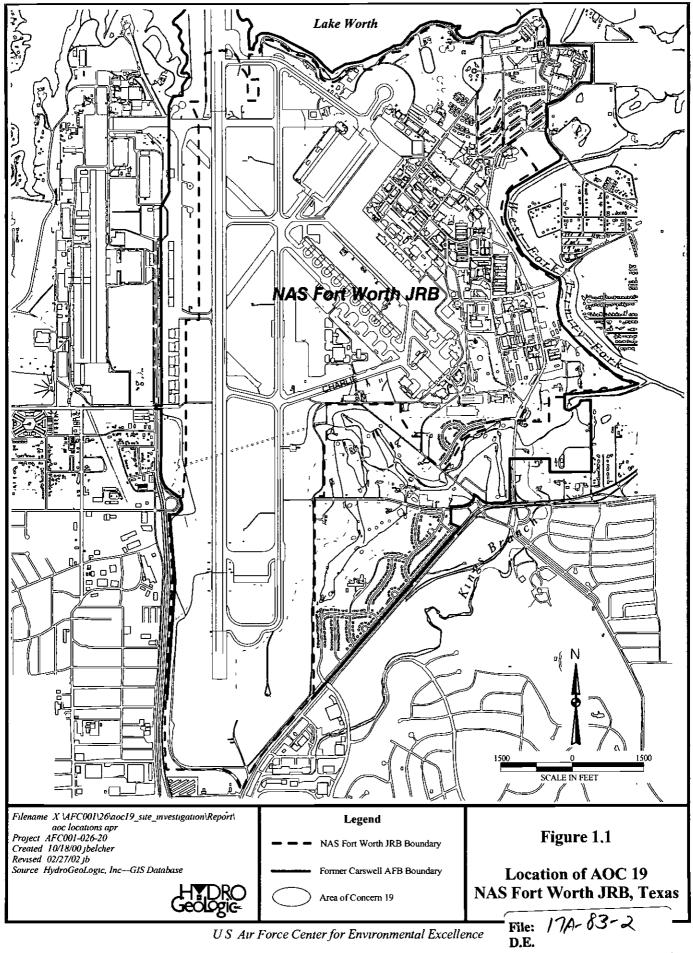
Section 4.0 presents the results of the SI and the potential releases to the environment.

Section 5.0 presents a discussion and analysis of the results presented in Section 4.0.

Section 6.0 presents the conclusions and recommendations for closure based on the results presented in Section 4.0.

Section 7.0 presents the references associated with the preparation of this report.

**FIGURES** 



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# TAB

SECTION 2.0

# 2.0 SUMMARY OF EXISTING INFORMATION

The climate, physiography, geology, hydrology, biology, and demographics of the NAS Fort Worth JRB area are described in the following sections.

# 2.1 INSTALLATION ENVIRONMENTAL SETTING

# 2.1.1 Physiographic Province

NAS Fort Worth JRB is located along the border zone between two physiographic provinces. The southeastern part of the base is situated within the Grand Prairie section of the Central Lowlands Physiographic Province. Most of NAS Fort Worth JRB is located within this province. This region is characterized by broad, eastward-sloping terrace surfaces that are interrupted by westward-facing escarpments. The land surface is typically grass covered and treeless except for isolated stands of upland timber. The northwestern part of the NAS Fort Worth JRB area is situated within the Western Cross Timbers Physiographic Province. This area is characterized by rolling topography and a heavy growth of post and blackjack oaks (Radian, 1989a,b). Surface elevations for this region range from about 850 feet above National Geodetic Vertical Datum (NGVD) west of the base to approximately 550 feet above NGVD along the eastern side of the base. Figure 2.1 is a section of the Lake Worth, Texas, U.S. Geological Survey topographic map showing the relief of the NAS Fort Worth JRB/Air Force Plant 4 (AFP 4) region.

# 2.1.2 Regional Geology

The geologic units of interest for the region, from youngest to oldest, are as follows: (1) the Quaternary Alluvium (including fill material and terrace deposits), (2) the Cretaceous Goodland Limestone, (3) the Cretaceous Walnut Formation, (4) the Cretaceous Paluxy Formation, (5) the Cretaceous Glen Rose Formation, and (6) the Cretaceous Twin Mountains Formation. A generalized cross section of the geology beneath NAS Fort Worth JRB is presented in Figure 2.2 (Radian, 1989a,b). The areal limits of surface exposure of these units at NAS Fort Worth JRB are shown in Figure 2.3. Cross section locations and individual cross sections at NAS Fort Worth JRB are presented in Figures 2.4 through 2.7 (CH2M HILL, 1996). The regional dip of the stratigraphic units beneath NAS Fort Worth JRB is between 35 and 40 feet per mile in an easterly to southeasterly direction. NAS Fort Worth JRB is located on the relatively stable Texas Craton, west of the faults that lie along the Ouachita Structural Belt. No major faults or fracture zones have been mapped near the base.

## 2.1.3 Groundwater

The water-bearing geologic formations located in the NAS Fort Worth JRB area may be divided into the following five hydrogeologic units, listed from the shallowest to the deepest: (1) an upper perched-water zone occurring in the alluvial terrace deposits associated with the Trinity River, (2) an aquitard of predominantly dry limestone of the Goodland and Walnut

Formations, (3) an aquifer in the Paluxy Sand, (4) an aquitard of relatively impermeable limestone in the Glen Rose Formation, and (5) a major aquifer in the sandstone of the Twin Each of these units is examined more explicitly in the following Mountains Formation. The relationship between these hydrogeologic units and geologic units is illustrated in Figure 2.8 (Radian, 1989a,b).

# 2.1.3.1 Alluvial Terrace Deposits

The uppermost groundwater in the area occurs within the pore space of the grains of coarse sand and gravels deposited by the Trinity River. In some parts of Tarrant County, primarily in those areas adjacent to the Trinity River, groundwater from the terrace deposits is used for irrigation and residential use. Groundwater from the terrace deposits is rarely used as a source of potable water due to its limited distribution and susceptibility to surface/storm water pollution (CH2M HILL, 1984).

Recharge to the water-bearing deposits occurs through infiltration from precipitation and from surface water bodies. Extensive on-site pavement and construction restricts this recharge. Additional recharge, however, comes from leakage in water supply lines, sewer systems, storm drains, and cooling water systems. In 1991, this leakage was calculated to be in excess of approximately 115.5 million gallons for NAS Fort Worth JRB and AFP 4 (General Dynamics Facility Management, 1992). This inflow of water to the shallow aquifer effects local groundwater flow patterns and contamination transport, along with increasing hydraulic head, which acts as the force to potentially drive water into lower aquifer systems. estimated hydraulic conductivity of the alluvial aquifer is 4.57 gallons per day per square foot (gpd/ft<sup>2</sup>) (Radian, 1989a,b).

This flow between aquifers is restricted by the Goodland/Walnut Formations; therefore, the alluvial terrace groundwater is not hydraulically connected to the underlying aquifers at NAS Fort Worth JRB. The primary water flow in the terrace deposits is generally eastward toward the West Fork Trinity River, although localized variations exist across the entire site. The hydraulic gradient across the base is variable, reflecting variations in the flow direction and localized recharge. Discharge from the aquifer occurs into surface water on-site, specifically Farmers Branch Creek.

Potentiometric surface maps of NAS Fort Worth JRB and AFP 4 alluvial terrace groundwater are presented as Figure 2.9 and Figure 2.10 for April 2001 and October 2001 groundwater elevation data, respectively. Both maps show an easterly trend in groundwater flow over the area of NAS Fort Worth JRB toward the West Fork Trinity River (HydroGeoLogic, 2001c).

# 2.1.3.2 Goodland/Walnut Aquitard

The groundwater within the terrace deposits is isolated from groundwater within the lower aquifers by the low permeability of the Goodland Limestone and Walnut Formations. The primary inhibitors to vertical groundwater movement within these units are the fine-grained clay and shale layers that are interbedded with layers of limestone. Some groundwater movement does occur between the individual bedding planes of both of these units, but the vertical hydraulic conductivity has been calculated to range between 1.2 x 10<sup>-9</sup> centimeters per second (cm/sec) to 7.3 x 10<sup>-11</sup> cm/sec for the NAS Fort Worth JRB and AFP 4 area. This corresponds to a vertical flow rate that ranges between 1.16 x 10<sup>-3</sup> feet per day (ft/d) to 5.22 x 10<sup>-3</sup> ft/d (Environmental Science and Engineering Incorporated [ESE], 1994).

At the AFP 4 "window area," the Goodland/Walnut aquitard is breached, and the alluvial terrace groundwater is in direct contact with the groundwater in the Paluxy aquifer. Several wells and borings have been advanced at NAS Fort Worth JRB to the Goodland/Walnut aquitard. There is no evidence that a similar window exists on the base property. All five monitoring wells that fully penetrate the Paluxy aquifer on NAS Fort Worth JRB property are represented in cross sections (Figures 2.5 through 2.7). These wells are USGS01P, USGS05P, USGS06P, USGS07P, and Paluxy 1 (P1).

# 2.1.3.3 Paluxy Aquifer

The Paluxy aquifer is an important source of potable groundwater for the Fort Worth area. Many of the surrounding communities, particularly White Settlement, obtain their municipal water supplies from the Paluxy aquifer. Groundwater from the Paluxy is also used in some of the surrounding farms and ranches for agricultural purposes. Due to the extensive use of the Paluxy aquifer, water levels have declined significantly over the years. Water levels in the NAS Fort Worth JRB vicinity have not decreased as much as in the Fort Worth area due to its proximity to the Lake Worth recharge area and the fact that the base does not obtain water from the Paluxy aquifer. Drinking water at the base is supplied by the city of Fort Worth, which uses Lake Worth as its water source. The groundwater of the Paluxy aquifer is contained within the openings created by gaps between bedding planes, cracks, and fissures in the sandstones of the Paluxy Formation. Just as the Paluxy Formation is divided into upper and lower sand members, the aquifer is likewise divided into upper and lower aquifers. The upper sand is finer grained and contains a higher percentage of shale than the lower sand. In 1989, Radian estimated the hydraulic conductivity and transmissivity to be 130 to 140 gpd/ft² and 1,263 to 13,808 gallons per day per foot (gpd/ft), respectively.

# 2.1.3.4 Glen Rose Aquitard

Below the Paluxy aquifer are the fine-grained limestone, shale, marl, and sandstone beds of the Glen Rose Formation. The thickness of the formation ranges from 250 to 450 feet. Although the sands in the Glen Rose Formation yield small quantities of groundwater in the area, the relatively impermeable limestone acts as an aquitard, restricting water movement between the Paluxy aquifer above and the Twin Mountains aquifer below.

# 2.1.3.5 Twin Mountains Aquifer

The Twin Mountains Formation is the oldest and deepest water supply source used in the NAS Fort Worth JRB area. The Twin Mountains Formation occurs approximately 600 feet below NAS Fort Worth JRB, with a thickness of between 250 to 430 feet. Recharge to the Twin Mountains aquifer occurs west of NAS Fort Worth JRB, where the formation out crops. Groundwater movement is eastward in the downdip direction. The Twin Mountains groundwater occurs under unconfined conditions in the recharge area and becomes confined as it moves downdip. Transmissivities in the Twin Mountains aquifer range from 1,950 to 29,700 gpd/ft and average 8,450 gpd/ft in Tarrant County. Hydraulic conductivities range from 8 to 165 gpd/ft² and average 68 gpd/ft² in Tarrant County (CH2M HILL, 1984).

# 2.1.3.6 Water Well Survey Results

An inventory of water supply wells within a one-half-mile radius of the NAS Fort Worth JRB boundary was conducted by HydroGeoLogic in 1997. Figure 2.11 illustrates the locations of 59 wells that were identified from TWC records. All of these wells were installed and completed in the Paluxy aquifer or the Twin Mountains aquifer. No active water wells are located on NAS Fort Worth JRB property. Water is supplied to the base by the city of Fort Worth, which obtains water from Lake Worth.

## 2.1.4 Surface Water

The topography of NAS Fort Worth JRB is fairly flat except for the lower lying areas along the tributaries of the Trinity River. The land surface slopes gently northeastward toward Lake Worth and eastward toward the West Fork Trinity River. Surface elevations range from about 690 feet above NGVD at the southwest corner of the base to approximately 550 feet above NGVD, along the eastern side of the base.

NAS Fort Worth JRB is located within the Trinity River Basin, adjacent to Lake Worth. The lake is a man-made reservoir created by damming the Trinity River at a point just northeast of the base. The surface area of the lake is approximately 2,500 acres. Lake Worth receives a limited amount of storm water runoff from NAS Fort Worth JRB during and immediately after rainfall events. Elevation of the water surface is fairly consistent at approximately 594 feet above NGVD, the fixed elevation of the dam spillway. Part of the eastern boundary of NAS Fort Worth JRB is defined by the West Fork Trinity River. River flow is towards the southeast into the Gulf of Mexico. Because the Trinity River has been dammed, the 100- and 500-year flood plains do not extend more than 400 feet from the center of the river or any of its tributaries.

Surface drainage is mainly east towards the West Fork Trinity River. The base is partly drained by Farmers Branch Creek, a tributary of the West Fork Trinity River. Farmers Branch Creek begins within the community of White Settlement and flows eastward. Just south of AFP 4, Farmers Branch Creek flows under the runway within two large culverts

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identified as an aqueduct. Most of the base drainage is intercepted by a series of storm drains and culverts, directed to oil/water separators (OWSs), and discharged to the West Fork Trinity River downstream of Lake Worth. A small portion of the north end of the base drains directly into Lake Worth.

NAS Fort Worth JRB currently has three storm water discharge points that are subject to National Pollution Discharge Elimination System (NPDES) requirements. Each discharge point is monitored weekly for chemical oxygen demand, oil and grease, and pH. The permit has been violated on numerous occasions. In 1979, these violations prompted the USEPA to formally demand a corrective action (CH2M HILL, 1984). Several additional sampling points were established to determine the flow of pollutants onto and off of the base. Samples were collected for a variety of parameters as circumstances (spills, fish kills, odors, and oil sheen) dictated (Radian, 1989a,b).

# **2.1.5** Climate

The climate in the Fort Worth area is classified as sub-humid with hot summers and dry winters. Tropical maritime air masses control the weather during much of the year, but the passage of polar cold fronts and continental air masses can create large variations in winter temperatures (TNRCC, 1996b). In the Dallas-Fort Worth area, daily mean temperatures range from 43.4 degrees Fahrenheit (°F) in January to 85.3 °F in July. The highest recorded temperature is 113 °F, and the lowest temperature is 2 °F. Freezing temperatures occur on average of 25 days in the year (National Climatic Data Center (NCDC), 2000).

Average relative humidity (after noon) ranges from 51 percent (September and October) to 62 percent (January) (NCDC, 2000). Mean annual precipitation recorded at the base is approximately 34.73 inches. The wettest months are May and October, with a secondary maximum in June. The period from November to March is generally dry, with a secondary minimum in August. Snowfall accounts for a small percentage of the total precipitation between November and March. Thunderstorm activity occurs at the base an average of 45 days per year, with the majority of the activity between April and June. Hail may fall 2 to 3 days per year. The maximum precipitation ever recorded in a 24-hour period is 1.49 inches. On the average, measurable snowfall occurs 5 days per year.

During 2001, the average annual temperature in the area was 65.6 °F, and monthly mean temperatures varied from 42.7 °F in January to 86.7 °F in July. The average daily minimum temperature in January was 33 °F, and the lowest recorded temperature was 19 °F. The average daily maximum temperature was 96.7 °F, and highest temperature recorded at the base during 2001 was 100 °F in the month of July. Freezing temperatures occur at NAS Fort Worth JRB an average of 11 days per year. (National Weather Service, 2002).

Lake evaporation near NAS Fort Worth JRB is estimated to be approximately 57 inches per year. Evapotranspiration over land areas may be greater or less than lake evaporation depending on vegetative cover type and moisture availability. Average net precipitation is

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expected to be equal to the difference between average total precipitation and average lake evaporation, or approximately minus 25 inches per year. Mean cloud cover averages 50 percent at NAS Fort Worth JRB, with clear weather occurring frequently during the year. Some fog is present an average of 83 days per year. Wind speed averages 7 knots; however, a maximum of 80 knots has been recorded. Predominant wind direction is from the southsouthwest throughout the year (TNRCC, 1996b).

# 2.1.6 Biology

Approximately 374 acres, or 14 percent, of NAS Fort Worth JRB is considered unimproved. indicating the presence of seminatural to natural biological/ecological conditions. The base lies in the Cross Timbers and Prairies Regions of Texas, where native vegetation is characterized by alternating bands of prairies and woodlands. The higher elevations on the base are covered by native and cultivated grasses such as little bluestem, Indian grass, big bluestem, side oats, grama, and buffalo grass. Forested areas occur primarily on the lower land and along the banks of streams. Common wood species include oak, elm, pecan, hackberry, and sumac. Several non-native species such as catalpa and chinaberry are common (Radian, 1989a,b).

Typical wildlife on the base includes black-tailed jackrabbits in grassy areas along the runway. In addition, there are cottontail rabbits, gray squirrels, and opossums in the wooded areas. Common birds include morning doves, meadowlarks, grackles, and starlings. Hunting and trapping are not allowed on the base, but in the nearby rural areas they are a very popular form of recreation (Radian, 1989a,b).

Reported game fish include black bass, sunfish, and catfish, all of which can be found in Lake Worth, Farmers Branch Creek, and one small pond located on base near the golf course equipment shed. According to the Texas Department of Parks and Wildlife and the U.S. Fish and Wildlife Service, there are no threatened or endangered species known to occur on NAS Fort Worth JRB. None of the federally listed endangered plant species for Texas are known to occur within 100 miles of Tarrant County. Of the federally listed endangered animals species, only the peregrine falcon and the whooping crane are known to occasionally inhabit the area; however, none of these is suspected to reside in the vicinity of NAS Fort Worth JRB (Radian, 1989a,b).

# 2.1.7 Demographics

The following sections describe the regional and site-specific demographics as they relate to the Fort Worth, Texas area and NAS Fort Worth JRB.

# 2.1.7.1 Regional Demographics

Approximately 1,278,606 people reside within Tarrant County, Texas (U.S. Department of Commerce, 1996). Of this population, 485,650 reside within the city limits of Fort Worth.

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Several smaller cities and villages make up the remainder of the population. The communities of White Settlement, Lake Worth, Westworth Village, River Oaks, and Sansom Park lie within a 3- mile radius of NAS Fort Worth JRB. The following populations that reside in the cities and villages are based on 1994 census data: White Settlement (city) 16,502; Lake Worth (city) 4,694; Westworth Village (town) 2,502; River Oaks (city) 6,747; and Sansom Park (city) 4,136 (U.S. Department of Commerce, 1994). Six schools are within a 2-mile radius of NAS Fort Worth JRB; the closest is 0.5 miles south (Rust, 1995).

The area surrounding NAS Fort Worth JRB is highly urbanized due to its proximity to the city of Fort Worth. The area is composed of a combination of residential, commercial, and light industrial properties that employ the majority of local residents (Rust, 1995).

# 2.1.7.2 Site-Specific Demographics

The current full-time population at NAS Fort Worth JRB is approximately 3,600 people, comprising 400 officers, 1,400 civilians, and 1,800 active reservists. Part-time military reservists will increase this population to over 6,000 military personnel (CH2M HILL, 1996).

Approximately 86 percent of NAS Fort Worth JRB has been developed by way of buildings, roads, parking lots, runways, and housing and recreational areas. On-site activities include various maintenance, inspection, and support activities for fuel systems, weapons, jet engines, aerospace ground equipment (AGE), and specialized ground equipment (HydroGeoLogic, 1999).

### 2.2 SITE-SPECIFIC ENVIRONMENTAL SETTING

The following sections describe the site-specific environmental setting of NAS Fort Worth JRB.

# 2.2.1 Site-Specific Soils

The U.S. Soil Conservation Service has identified four major soil associations in the area of NAS Fort Worth JRB. The first association is the surficial soils of the nearly level to gently sloping clayey soils of the Sanger-Purves-Slidell Association. Second is the Aledo-Bolar-Sanger Association, which is located within the southwestern portion of the Sanger-Purves-Slidell Association and is characterized as an increasingly loamy clayey soil of gentle to moderate slope. The third association, the Bastsil-Silawa Association separates the Sanger-Purves-Slidell Association from the Frio-Trinity Association. The Bastsil-Silawa Association is characterized as a sandy clay loam of nearly level slope (ESE, 1994). The clayey soils of the Frio-Trinity Association make up the fourth soil association and are located along the flood plain of the West Fork Trinity River. The areal limits of each of these soil associations and their occurrence on-site are shown in Figure 2.12.

# 2.2.2 Site-Specific Geology

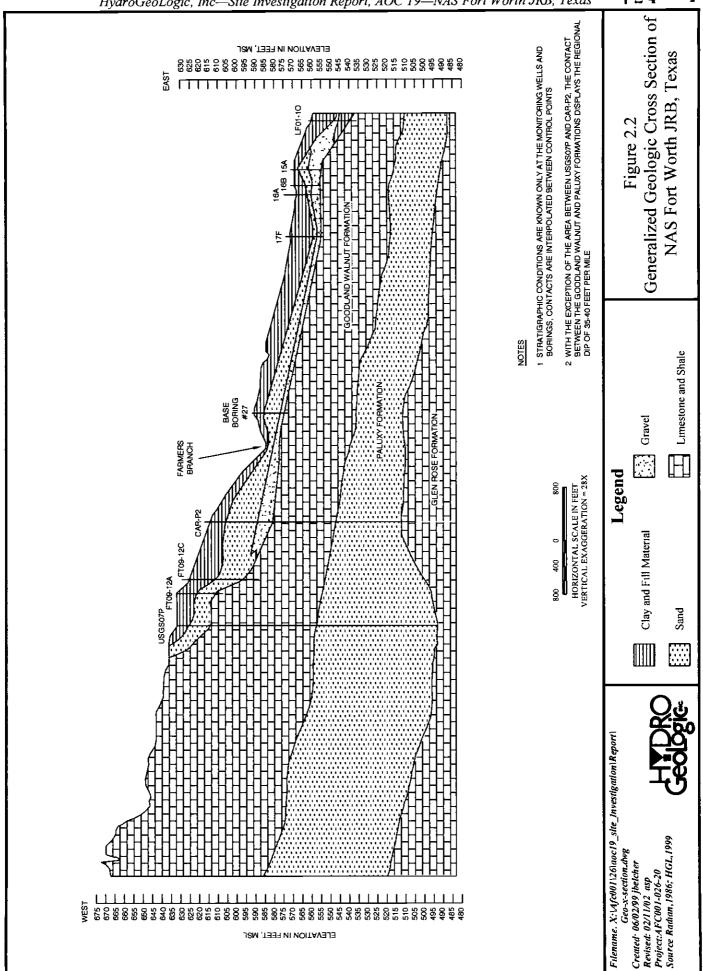
The majority of NAS Fort Worth JRB is covered by alluvium deposited by the Trinity River during flood stages. The Quaternary Period alluvium (Holocene Epoch) occurs downstream from the Lake Worth Dam in the current flood plain of the West Fork Trinity River, on the east side of the facility. Older alluvial deposits and terrace deposits (Pleistocene Epoch) also occur on-site. The alluvium is composed of gravel, sand, silt, and clay of varying thicknesses and lateral extent. The thickness of these materials ranges from 0 to 60 feet. Fill material is also included within these deposits where landfills, waste pits, excavation sites, and other construction activities have altered the original land surface. This fill material is made up of clay, silt, sand, and gravel mixtures, but may also contain debris and other waste (Radian, 1989a,b).

Below the alluvial terrace deposits are the Cretaceous-age Goodland and Walnut Formations, which form the bedrock surface beneath NAS Fort Worth JRB. Both formations consist of interbedded, fossiliferous, hard limestone and calcareous shale. The upper formation, the Goodland Limestone, is exposed on the southern portion of the base, south of White Settlement Road. The Goodland is a chalky-white, fossiliferous limestone and marl. The thickness of the Goodland Limestone ranges from 20 to 25 feet. Below the Goodland Formation is the Walnut Formation (or Walnut Clay). The Walnut Formation is exposed in a small area along the shores of Lake Worth and Meandering Road Creek. This formation is a shell agglomerate limestone with varying amounts of clay and shale. It ranges in thickness from 25 to 35 feet throughout the site except where erosion has produced a few thinner areas. Subsurface investigations have located troughs and paleochannels that are eroded into the top of the bedrock at NAS Fort Worth JRB. These paleochannels are typical of an erosional surface modified by fluvial processes and are filled with sand and gravel deposits ranging in thickness from 15 to 35 feet (CH2M HILL, 1996).

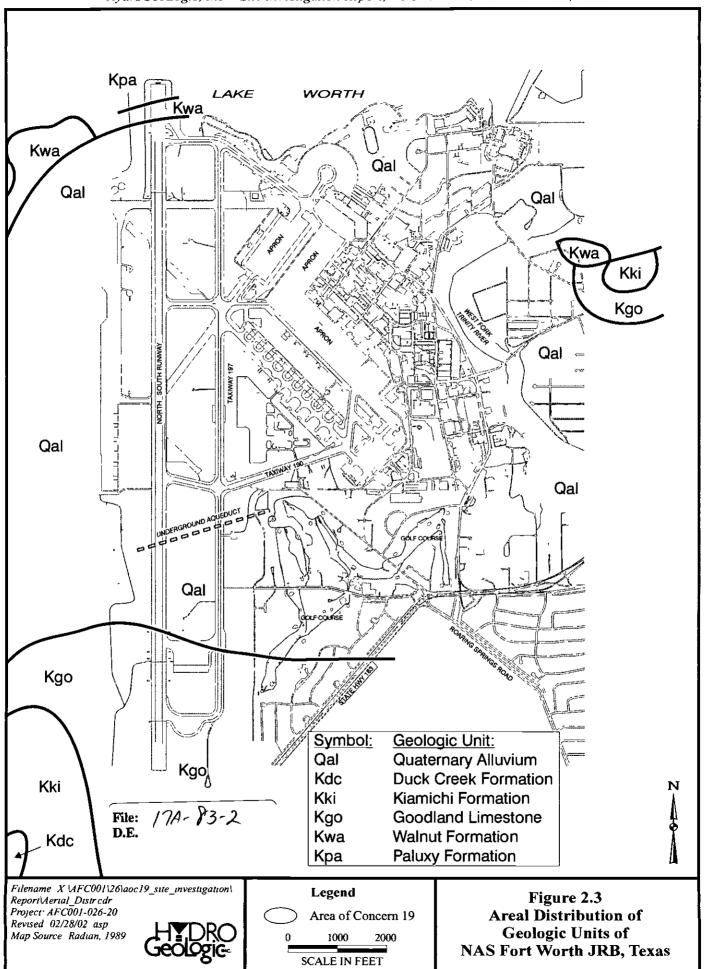
Below the Walnut Formation is the Paluxy Formation (or Paluxy Sand). The Paluxy Formation underlies all of NAS Fort Worth JRB. The formation consists of several thick sandstone layers that are separated by thin, discontinuous shale and claystone layers. Sandstones in the formation are primarily a fine-to coarse-grained sand with minor amounts of clay, sandy clay, pyrite, lignite, and shale. The lower section of the Paluxy is generally coarser-grained than the upper section (CH2M HILL, 1996). Total formation thickness ranges from 130 to 175 feet, with variable thickness and occurrence of individual layers across the site. Only one unit in this formation, a shale/silty shale, can be extensively mapped across the base.

The older Glen Rose and Twin Mountains Formations are not exposed at NAS Fort Worth JRB. The Glen Rose Formation consists primarily of calcareous sedimentary rock and some sands, clays, and anhydrite. The Glen Rose caps the Twin Mountain Formation, which is the oldest Cretaceous Formation in the NAS Fort Worth JRB area. The Twin Mountain Formation consists of a basal conglomerate of chert and quartz, grading upward into coarse-to fine-grained sand interspersed with varicolored shale.

**FIGURES** 



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HydroGeoLogic, Inc —Site Investigation Report, AOC 19 NAS Fort Worth JRB, Texas

# Figure 2.7

Cross Section B'-B"

B

640 -







Stratigraphic Contact

Inferred Stratigraphic Contact

Fine- to Coarse-Grained Sand, Clayey Sand, Silty Sand, Gravelly Sand

Clay, Silty Clay, Sandy Clay

Silt, Clayey Silt, Sandy Silt **\}** 

2000 2000 2000

Gravelly Clay or Clay w/Lımestone

Fill, Soil, Gravel, Rock  Coarse Gravel, Silty Gravel, Sandy Gravel ွိ

Limestone 

Claystone/Mudstone/Shale 

Sandstone 

HORIZONTAL SCALE IN FEET 909

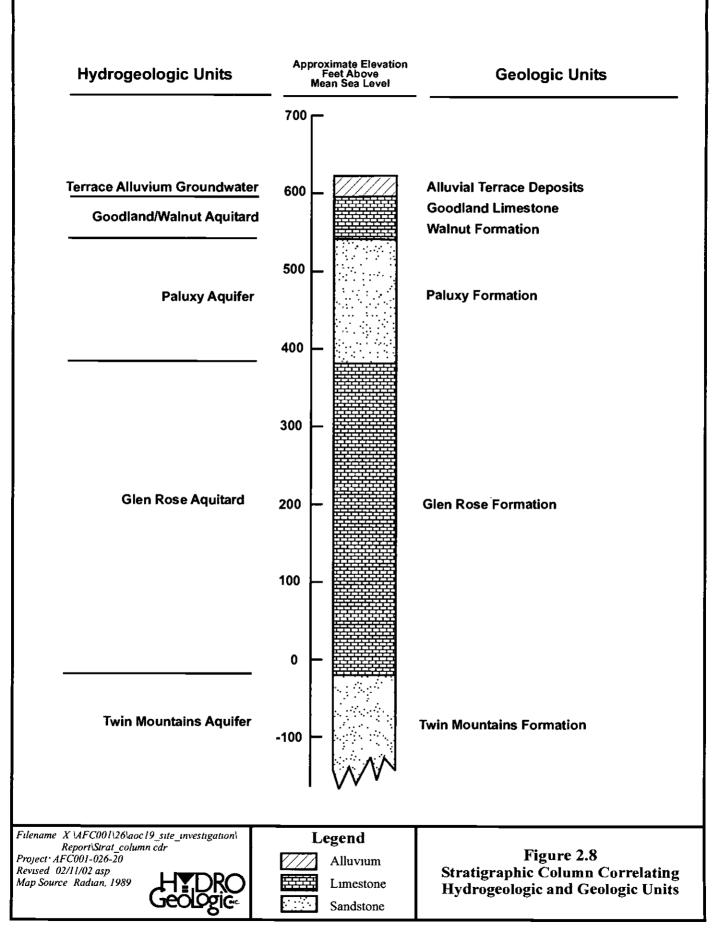
Filename X AFC001/26\aoc19\_site\_investigation\
Report\B -B \cdot x-section cdr\
Project AFC001-026-20\
Revised 02/11/02 asp\
Source CH2M HILL, 1996

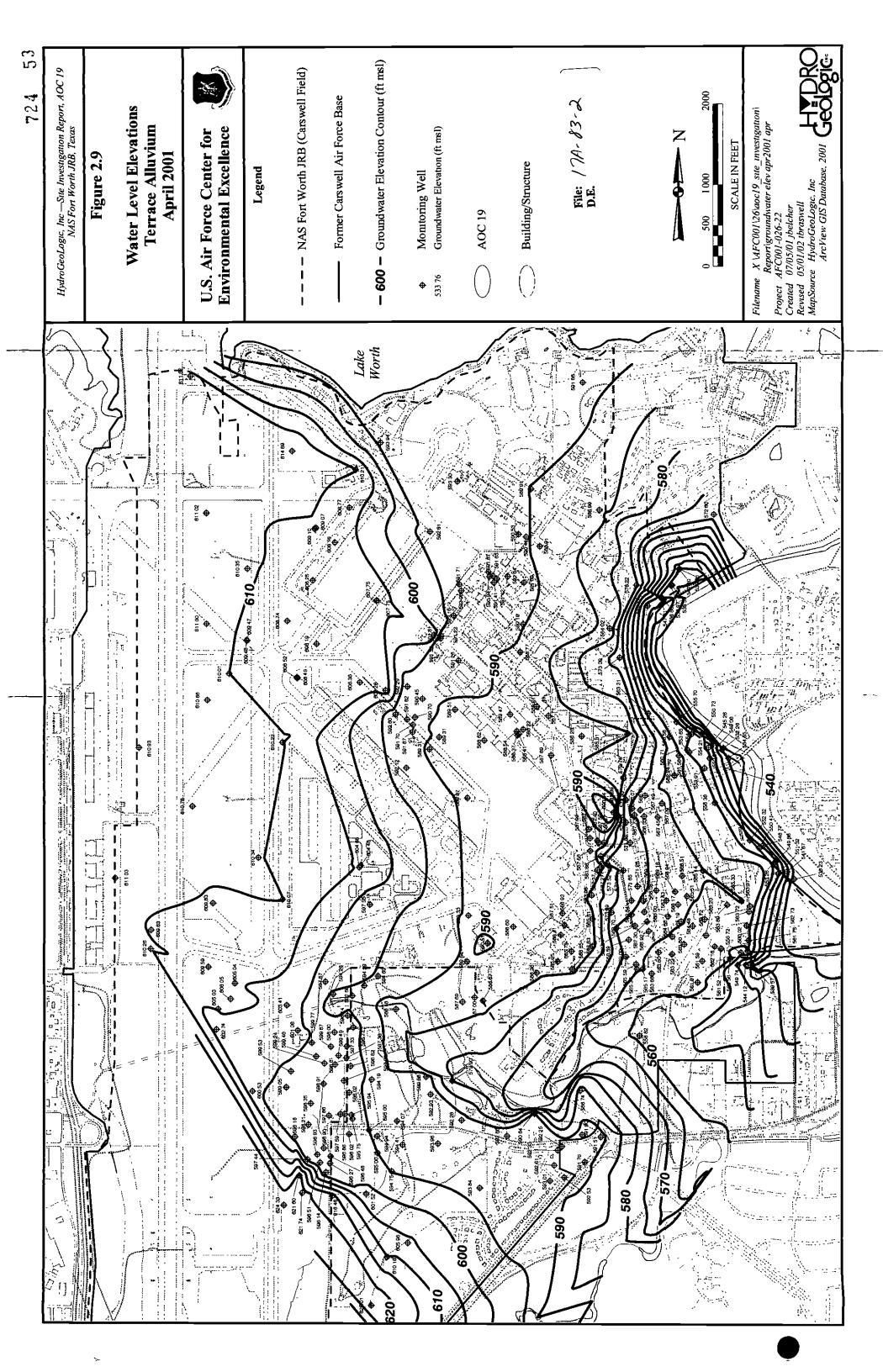
2) THE LITHOLOGIC LOGS FOR CERTAIN USGS BORINGS (USGS, 1996)
CHARACTERIZE THESE SEQUENCES AS "SANDSTONE" WHICH, WHEN
COMPARED WITH OTHER LOGS IN THIS AREA, SEEMS UNEXPECTED AT
THIS ELEVATION IN THE SECTION THEREFORE, HYDROGEOLOGIC HAS CORRELATED
THESE UNITS WITH THE TERRACE ALLUVIAL SANDS

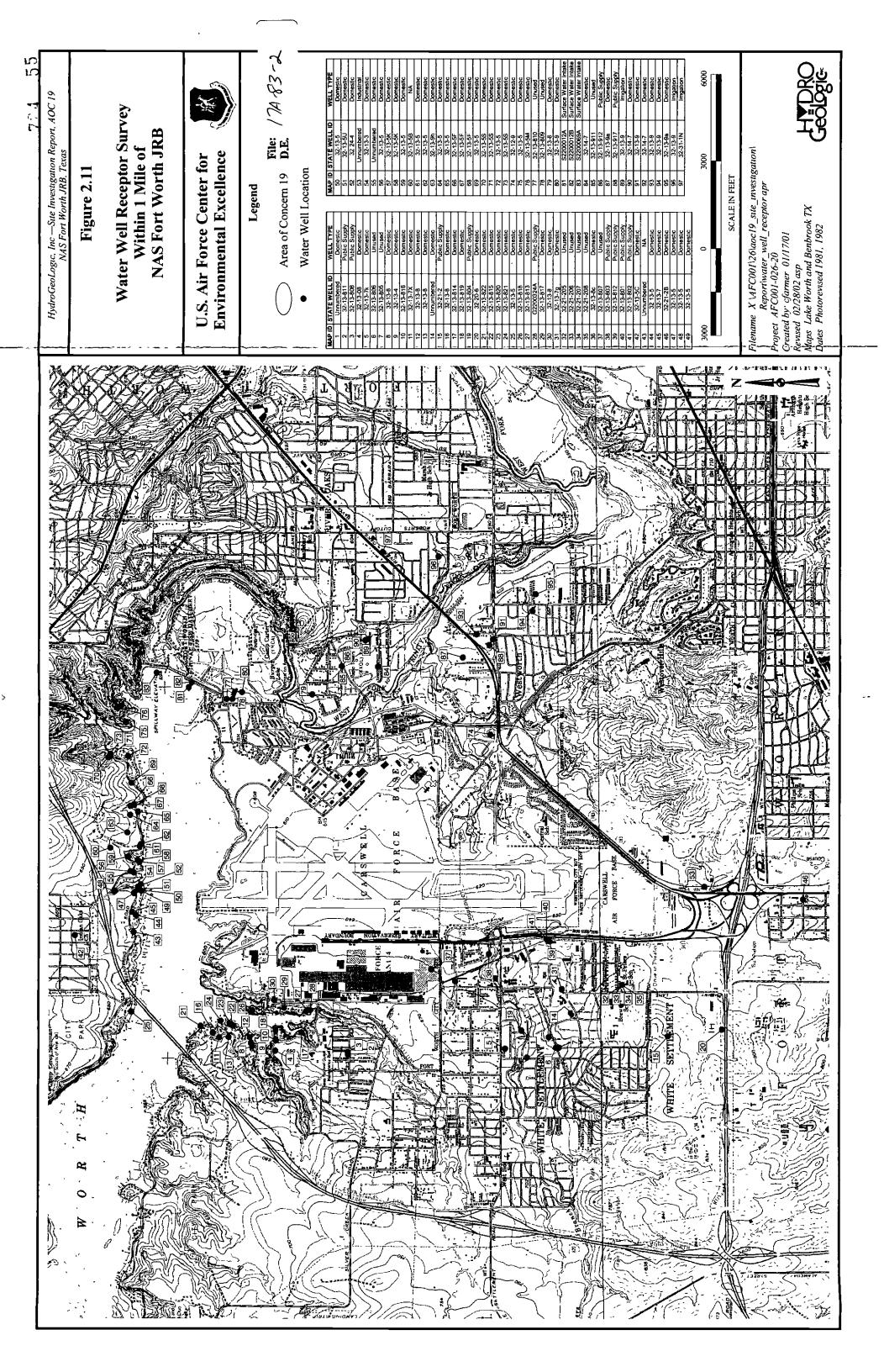
1) SEE FIGURE 2 4 FOR THE CROSS SECTION LOCATION AND BORING LOG REFERENCES

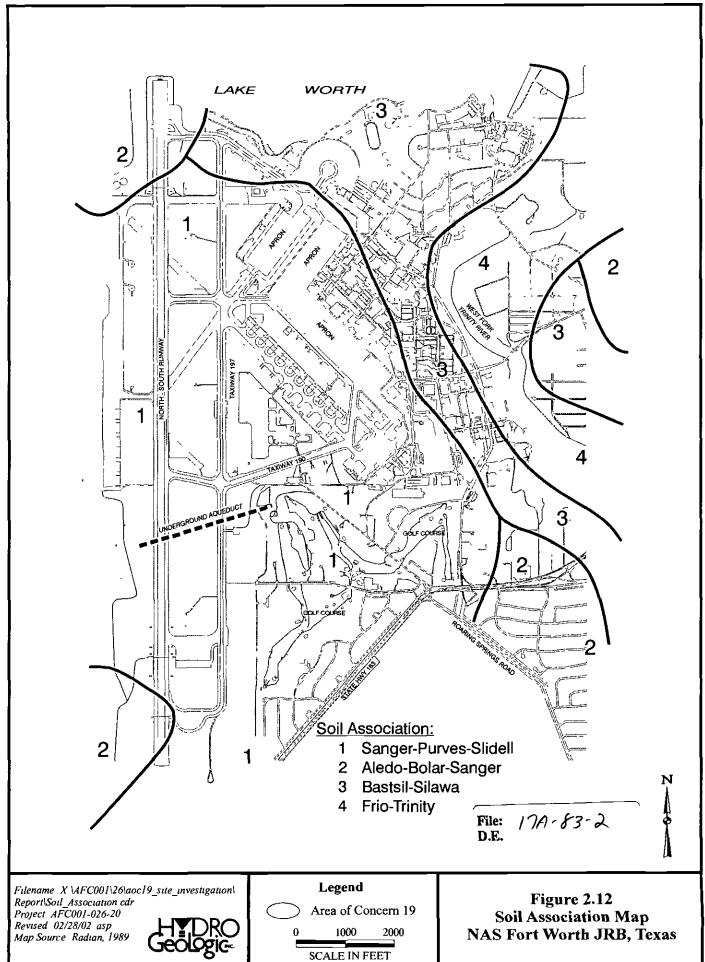
WOSON ! SEE NOTE 2 GOODLAND-WALNUT FORMATION (USGS, 1995) PALUXY FORMATION (USGS, 1995) 1045 VON SIMO OLE SING! ł GM118-01B GOODLAND-WALNUT FORMATION
(USGS, 1995) PALUXY FORMATION (USGS, 1995) ◆- SEE NOTE 2 USGS06P 610 -510-500 630 620-009 590 580 570 550 540 530-520-490 560

ELEVATION (FT)









# TAB

SECTION 3.0

# 3.0 SUMMARY OF INVESTIGATION ACTIVITIES

This section provides a summary of previous/ongoing investigations in the AOC 19 area and describes activities conducted as part of this investigation. Preliminary activities conducted for the site characterization included aerial photo interpretation, site reconnaissance, and utility clearance. Chemical characterization activities included surface and subsurface soil sample collection and groundwater sample collection. In addition, a geophysical survey was performed to identify subsurface anomalies, and exploratory excavations were completed to characterize those anomalies identified by the geophysical survey.

# 3.1 SWMU 25 RCRA FACILITY INVESTIGATION

Prior to the current SI, HydroGeoLogic conducted an RFI at SWMU 25/Landfill 8 which extends over the western third of AOC 19. The overlapping boundaries of SWMU 25/Landfill 8 and AOC 19 are depicted in Figure 3.1. RFI activities at SWMU 25/Landfill 8 began in August 1997, and continued until June 2000. The results of the RFI showed concentrations of several constituents above RRS 1 and 2 within the AOC 19 boundary. However most of these concentrations were removed during the interim remedial action (IRA) at SWMU 25/Landfill 8 conducted by International Technologies Corporation (IT) in July and August 2000. The remaining constituents of concern were delineated or eliminated as statistically probable deviations of background concentrations. A full discussion of the SWMU 25/Landfill 8 RFI is presented in the Final RCRA Facility Investigation Report, Solid Waste Management Units 22, 23, 24, and 25, NAS Fort Worth JRB, Texas (HydroGeoLogic, 2001b). Based on the conclusions of the RFI Report, TNRCC granted closure of SWMU 25/Landfill 8 under RRS 2 in June 2001.

# 3.2 BASEWIDE TCE PLUME

A basewide groundwater sampling and analysis program (GSAP) was initiated for NAS Fort Worth JRB in April 1995 to address groundwater contamination associated with various SWMUs and AOCs identified on the base. Twenty-two rounds of quarterly or semi-annual sampling have been implemented to date. The major source of the trichloroethene (TCE) plume is from the upgradient site AFP 4. AFP 4 was placed on the National Priority List (NPL) in August 1990 because of a large release of TCE arising from past disposal practices. While the source areas are currently being remediated under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the dissolved TCE plume appears to have migrated east of AFP 4, extending under NAS Fort Worth JRB. The regional TCE plume can be subdivided into northern and southern lobes (HydroGeoLogic, 2000e).

AOC 19 is located in the vicinity of the southern lobe of the TCE plume, as shown in Figure 3.2. The concentrations of TCE upgradient of AOC 19 from April to July 2001 ranged from 3.800 J mg/L (HM-112) to 0.280 mg/L (HM-126), as depicted in Figure 3.2.

# 3.3 SITE RECONNAISSANCE AND UTILITY CLEARANCE

Prior to mobilizing to the field, HydroGeoLogic conducted site reconnaissance to select sample locations and to assess requirements for site preparation and clearance of underground utilities. Proposed drilling locations were determined and marked within the area of AOC 19 based on accessibility, utility locations, site extent identified in aerial photographs, results of the SWMU 25 RFI, and topography, which slopes downward toward Farmer's Branch Creek in a southerly direction.

As this SI involved multiple phases, the Navy Public Works office issued an individual dig permit for each phase of site activities that involved subsurface work at AOC 19. Each dig permit was valid for 30 days, and the corresponding HydroGeoLogic field effort was conducted during this 30-day window.

Prior to initiating subsurface activities, HydroGeoLogic marked the boring locations with stakes and notified the Navy Public Works Office regarding the intended field investigations and sampling activities. A local utility company marked and cleared all subsurface utilities within a 50-foot radius of the proposed AOC 19 boring/excavation locations. The Phase I utility clearance was requested on April 28, 2000 and was received on May 8, 2000 (permit call number 534). Phase II utility clearances were requested on August and December 3, 2001, and received on August 12, 2001 and December 3, 2001 (permit call numbers 012151081 and 013375126, respectively).

# 3.4 AOC 19 SITE INVESTIGATION ACTIVITIES

The following sections describe activities conducted as part of this SI. As stated previously in Section 1.0, all sampling activities were conducted in accordance with the RFI/SI WPs (HydroGeoLogic, 2000a) along with planning documents specifically developed for each subsequent phase of field activities referenced in the subsections below.

# 3.4.1 Phase I – Site Investigation Activities

Phase I of the SI at AOC 19 was initiated on May 12, 2000 and was completed on May 15, 2000. A total of four soil borings were advanced at AOC 19 using DPT during Phase I. Figure 3.1 illustrates the Phase I soil boring locations, depicted in blue. Soil boring BHGLAOC1901 was advanced in the north central area of AOC 19. Soil borings BHGLAOC1902 and BHGLAOC1903 were advanced along the eastern boundary of AOC 19. Soil boring BHGLAOC1904 was advanced along the south central boundary of AOC 19. The purpose of these borings was to identify and characterize potential contamination associated with AOC 19. Continuous cores were used to sample and evaluate the physical characteristics of the soil. Soil samples were collected at 5-foot intervals from the ground surface to the water table or refusal, and submitted for analysis. Based on the potential wastes handled at AOC 19 (Section 1.2), soil samples were analyzed for the following reduced list of Appendix IX analytes:

# Appendix IX

SW8260B - VOCs

• SW8270C - semivolatile organic compounds (SVOCs)

• SW6010B - trace elements (metals)

• SW7471A - mercury

During Phase I, a total of five surface (four samples and one duplicate) and five subsurface soil samples were submitted for chemical analysis<sup>1</sup>. Results of the AOC 19 Phase I soil investigation are presented in Section 4.0.

• SW7471A - mercury

# 3.4.2 Phase II - Site Investigation Activities

The second phase of SI field activities at AOC 19 was conducted in various stages throughout 2001. All field work associated with the Phase II activities was performed in accordance with the Phase II Work Plan Addendum, RCRA Facility Investigation of SWMUs 19, 20, 21, and 53; and Site Investigation of AOC 19 (HydroGeoLogic, 2000b). Phase II investigation activities consisted of the following:

- geophysical survey
- exploratory excavations
- soil boring installation/soil characterization
- monitoring well installation/groundwater characterization

# 3.4.2.1 Geophysical Survey

Due to the proximity of AOC 19 to SWMU 25/Landfill 8, a geophysical survey was performed by a HydroGeoLogic subcontractor in February 2001. This survey was performed using magnetic, time-domain electromagnetic (EM) induction, and frequency-domain EM induction techniques. The instrumentation consisted of a Geometrics G-858G magnetic gradiometer for survey data acquisition, a Geonics EM61 high-sensitivity metal detector for the time-domain EM survey, and a Geonics EM31 terrain conductivity meter for the frequency-domain survey. Both Geonics units were coupled to an Omnidata DL720 digital data logger when in use.

The results of this survey were reported in Surface Geophysical Survey Report, AOC 19 Site/SWMUs 19 & 20 Site (IT, 2001). The geophysical report is included as Appendix C and the results are discussed in Section 4.1.

<sup>&</sup>lt;sup>1</sup> Due to a sample delivery problem, the VOCs fraction was recollected from the surface and subsurface intervals of BHGLAOC1901 on May 26, 2000.

# 3.4.2.2 Exploratory Excavations

Based on the results of the geophysical survey, five anomalies, THGLAOC1901 through THGLAOC1905, were investigated by exploratory excavations in August 2001. All work was performed in accordance with the *Excavation Work Plan, SWMUs 19, 64, and AOC 19* (HydroGeoLogic, 2001a). The locations of the Phase II exploratory excavations are shown on Figure 3.1, along with the locations of three test pits completed within the boundary of AOC 19 during the SWMU 25/Landfill 8 RFI in 1997. The Phase II excavation activities at AOC 19 were initiated and completed in August 2001. One soil sample was collected from the floor of exploratory excavation THGLAOC1905 due to the uncovering of three crushed 55-gallon drums. This sample, THGLAOC1905-02, was analyzed for Appendix IX VOCs (SW8260B), SVOCs (SW8270C), and metals/mercury (SW6010B/SW7000A series/SW7141A)<sup>3</sup>. Excavation findings and analytical results are presented in Section 4.1.

# 3.4.2.3 Soil Boring Installation/Soil Characterization

A total of 12 soil borings were advanced at AOC 19 during Phase II of the SI, 3 of which were completed as monitoring wells. As stated in the Phase II WP Addendum (HydroGeoLogic, 2000b), the purpose of the Phase II investigation was twofold: to sample selected soil intervals for analysis of TCE by method SW8260B in order to confirm or delineate the results of the Phase I soil investigation, and to install and sample groundwater monitoring wells immediately downgradient from the site. Six Phase II borings were originally planned; three of these borings (BHGLAOC1905, BHGLAOC1906, and BHGLAOC1907) would be advanced and sampled for confirmation/delineation, and three others (WHGLTA050, WHGLTA051, and WHGLTA052) would be advanced and sampled for delineation purposes, and then completed as groundwater monitoring wells (see Section 3.4.2.4). Based on geophysical investigation results and the analytical results from subsequent exploratory excavations (see Sections 3.2.4.1 3.2.4.2 above), the SI was expanded to include borings BHGLAOC1908, BHGLAOC1909, and BHGLAOC1910. Based on the August 2001 Phase II results, three additional soil borings, BHGLAOC1911, BHGLAOC1912, and BHGLAOC1913 were advanced in December 2001. These additional borings were advanced after consultation with AFCEE and with AFCEE's concurrence. All Phase II soil boring locations are depicted in red in Figure 3.1. The analytical results from the Phase II investigation are presented in Section All soil sampling activities were performed in accordance with the project WPs (HydroGeoLogic, 2000a and 2000b). The rationale for Phase II boring locations and the analytes requested for analysis are presented in the following paragraphs.

<sup>&</sup>lt;sup>2</sup> Although not identified in the original geophysical survey, THGLAOC1902 was excavated based upon a high magnetic locator reading at the time the exploratory excavations were being conducted at the site.

<sup>&</sup>lt;sup>3</sup> This sample was analyzed for a broader list of analyses than proposed in the Excavation WP based on the materials revealed in excavation THGLAOC1905.

One of the twelve Phase II borings, BHGLAOC1907, was advanced for confirmation purposes. The 10-foot interval of this confirmation boring was sampled in August 2001 in order to confirm a TCE detection in the 10-foot interval of BHGLAOC1901.

Two of the twelve Phase II soil borings were advanced for additional site characterization purposes. These characterization borings, BHGLAOC1905<sup>4</sup> and BHGLAOC1908, were advanced in order to further characterize the bermed area southwest of THGLAOC1905, where road construction debris was uncovered. These borings were installed in order to evaluate whether any possible landfill material from SWMU 25/Landfill 8 within AOC 19 did not pose a threat to human health or the environment. Soil samples were collected from borings BHGLAOC1905 and BHGLAOC1908 every 5 feet from the ground surface to the top of the water table, or refusal, whichever occurred first. The following methods were used to analyze the Phase II characterization borings:

# Appendix IX

SW8260B - VOCs
 SW8270C - SVOCs

• SW6010B - trace elements (metals)

• SW7471A - mercury

A total of nine delineation borings (including the three borings completed as monitoring wells) were advanced during Phase II. In August 2001, three soil borings, BHGLAOC1906, BHGLAOC1909, and BHGLAOC1910, were advanced within and around the perimeter of AOC 19 in order to delineate concentrations detected in Phase I and excavation THGLAOC1905 (Figure 3.1). Based upon the August 2001 analytical results, it was necessary to advance three additional soil borings, BHGLAOC1911 through BHGLAOC1913, in December 2001 for delineation. Based on the results of the Phase I and II soil samples, the samples from the following borings were analyzed for TCE by method SW8260B: BHGLAOC1906, BHGLAOC1913, and WHGLTA050 through WHGLTA052. Based on the analytical results of the sample collected from exploratory excavation THGLAOC1905, the samples from the following borings were analyzed for polynuclear aromatic hydrocarbons (PAHs) by method SW8270C: BHGLAOC1909, BHGLAOC1910, BHGLAOC1911, and BHGLAOC1912. Additional detail on the Phase II delineation borings is provided in the following paragraphs.

Soil boring BHGLAOC1906 was installed in order to delineate TCE in the subsurface soil south of BHGLAOC1904 in accordance with the Phase II WPs (HydroGeoLogic, 2000b). Soil borings BHGLAOC1909 and BHGLAOC1910 were added during the field effort to delineate the detections of PAHs in the soil sample collected from floor of excavation THGLAOC1905. Soil boring BHGLAOC1909 was sampled at the 5-foot interval for southwestern delineation of

<sup>&</sup>lt;sup>4</sup> BHGLAOC1905 was originally planned as a eastern delineation boring for TCE; however, based on low TCE concentrations in the soil samples collected during monitoring well installation, this was no longer necessary.

THGLAOC1905, and BHGLAOC1910 was sampled at the surface, 5-foot, and 10-foot intervals for western delineation of THGLAOC1905. A total of 3 surface and 11 subsurface (10 samples and one duplicate) soil samples were submitted for chemical analysis in August 2001.

Three delineation soil borings, BHGLAOC1911 through BHGLAOC1913, were advanced within and around the perimeters of AOC 19 in December 2001. Based on the August 2001 analytical results, a vertical delineation boring (BHGLAOC1911) and a northern delineation boring (BHGLAOC1912) for the samples collected from the exploratory excavation were necessary. The 10-foot interval from boring BHGLAOC1911 and the 5- and 10-foot intervals for BHGLAOC1912 were sampled and analyzed for PAHs using method SW8270C; the 5- and 10-foot intervals of boring BHGLAOC1913 were sampled and analyzed for TCE by method SW8260B. In December 2001, six subsurface soil samples (five samples and one duplicate) were submitted for chemical analysis.

The remaining three delineation soil borings were completed as monitoring wells in February 2001: WHGLTA050, WHGLTA051, and WHGLTA052. Based on the results of the Phase I soil investigation, soil samples were collected from the surface and 5-foot intervals of monitoring wells WHGLTA050 and WHGLTA051. In addition, a soil sample was collected from the 5-foot interval of monitoring well WHGLTA052. All soil samples collected during the installation of the AOC 19 monitoring wells were analyzed for TCE by method SW8260B. A total of two surface and three subsurface soil samples were submitted for chemical analysis in February 2001.

# 3.4.2.4 Monitoring Well Installation/Groundwater Characterization

Monitoring wells WHGLTA050, WHGLTA051, and WHGLTA052 were installed down- and crossgradient of AOC 19 in February 2001. Monitoring wells WHGLTA050 and WHGLTA051 were installed further east of the fence than preferred due to piles of golf course construction rubble that restricted rig access near the NAS Fort Worth boundary. Delineation soil samples collected during monitoring well installation are discussed in Section 3.4.2.3.

Three rounds of groundwater sampling were conducted two months apart according to the RCRA permit. Sampling occurred in February, April, and June 2001. In addition to the three wells installed for this investigation, existing upgradient monitoring well WHGLTA004 and existing crossgradient monitoring well WHGLTA801 were sampled for TCE by method SW8260B<sup>5</sup>.

<sup>&</sup>lt;sup>5</sup> Groundwater samples were analyzed for the full suite of VOCs listed in the 2000 Basewide QAPP (HydroGeoLogic, 2000b) in conjunction with the April 2001 Semi-Annual Sampling Event conducted in support of the Basewide Groundwater Sampling and Analysis Program (GSAP). Only the TCE results for the April 2001 samples are relevant to the SI. The full set of analytical results for the April 2001 sampling event is presented in Basewide Groundwater Sampling and Analysis Program, April 2001 Semi-Annual Report (HydroGeoLogic, 2001c).

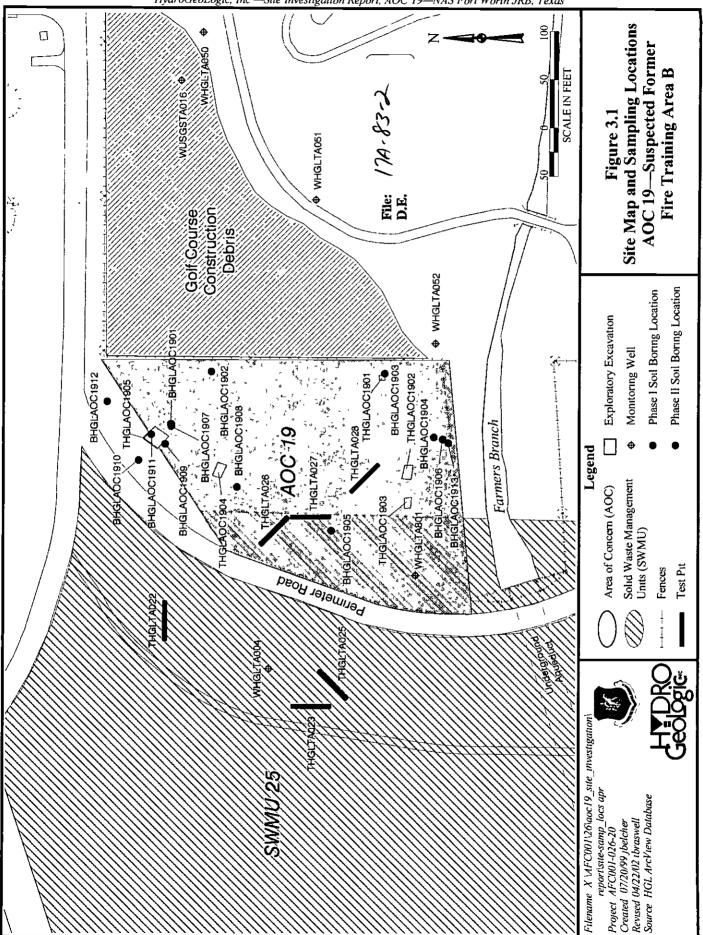
The analytical results from the groundwater samples are intended to determine if the soil at AOC 19 is impacting groundwater at the site. Results of the AOC 19 groundwater investigation are presented in Section 4.5 of this SI.

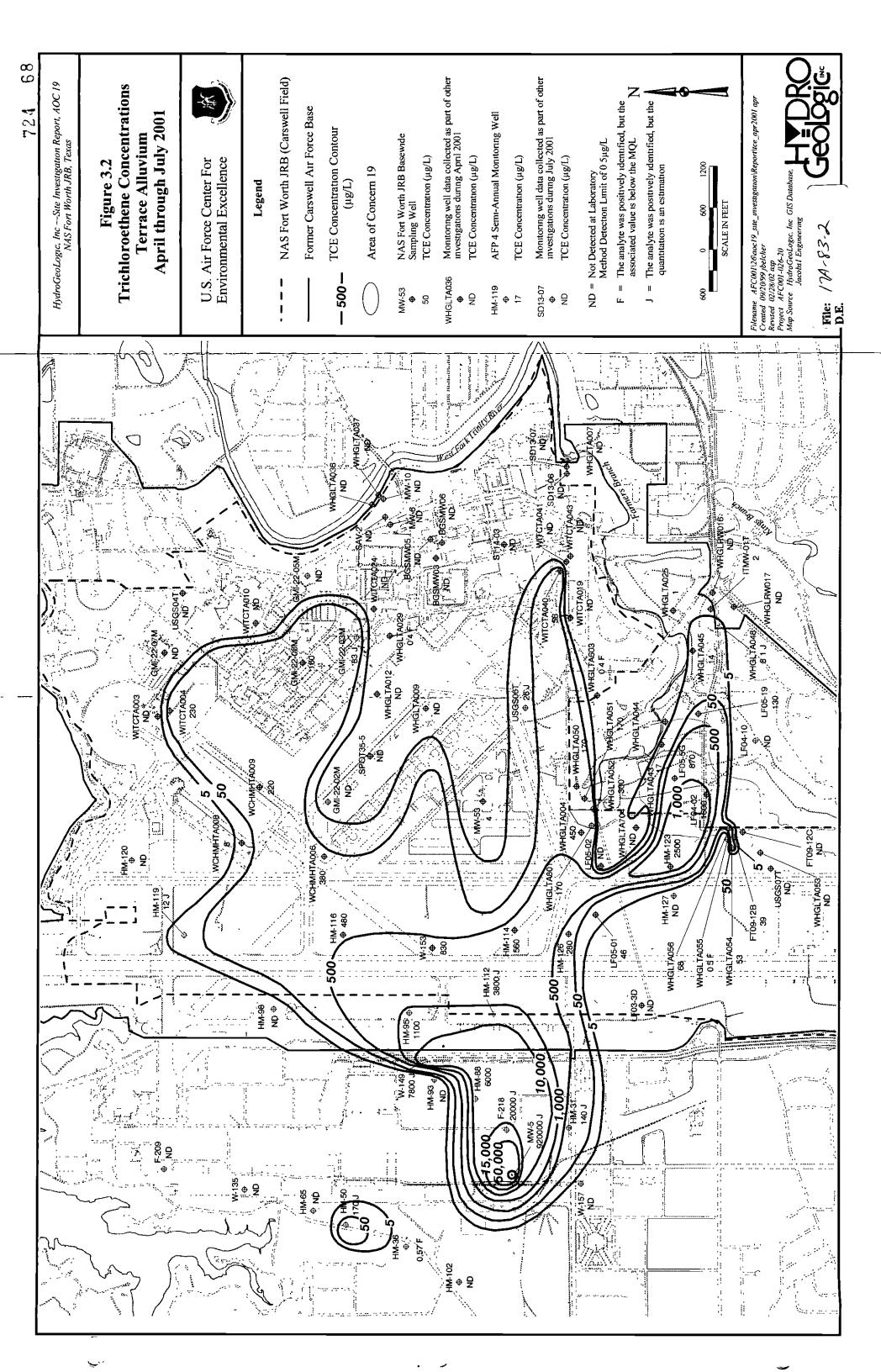
# 3.5 ELEVATION AND LOCATION SURVEY

All sampling points including soil borings, monitoring wells, and excavations were surveyed by Baird, Hampton & Brown, Inc., of Fort Worth, Texas. In addition, the corners of the geophysical grids were also surveyed. Vertical and horizontal measurements were collected in accordance with the RFI WPs (HydroGeoLogic, 2000a). Surveying data are provided in Appendix D.

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**FIGURES** 





# TAB

SECTION 4.0

# 4.0 INVESTIGATION RESULTS

This section presents the results from the investigation activities conducted during the AOC 19 SI. The findings from the exploratory excavations are presented in Table 4.1 and the analytical results are summarized in Tables 4.2 through 4.5. All soil and groundwater samples were analyzed in accordance with the rationale presented in the RFI/SI WPs (HydroGeoLogic, 2000a) and Phase II WPs Addendum (HydroGeoLogic, 2000b).

As stated previously, analytical results were compared to the applicable RRS 1 values in order to determine if a release has occurred at AOC 19. The results from samples collected and analyzed for trace metals were compared to the approved base-specific background values as presented in the Final Basewide Background Study (Jacobs, 1998). The results from samples collected and analyzed for organic compounds were compared to respective MQLs. Furthermore, all analytical results exceeding RRS 1 values were compared to available MSCs. All AOC 19 soil detections are presented in tabular form in this section. Complete analytical data summaries for soil samples are presented in Appendix E. As the complete analytical data for all Phase II groundwater samples are presented in Table 4.5 in this section, these data are not included in Appendix E.

The SPLP extraction method was used in order to possibly provide a site specific MSC if analytes were detected above the applicable MSC in the original sample. When an SPLP extraction and analysis was performed, the result was compared to the applicable industrial groundwater MSC. If the result in the extract was below this groundwater MSC, then the corresponding soil MSC was adjusted to the highest soil value that is associated with a "passing" SPLP result, provided that there is no soil result at the site with a lower detection for the same analyte that "failed" subsequent SPLP analysis.

# 4.1 GEOPHYSICAL AND EXPLORATORY EXCAVATION FINDINGS

A total of eight test pits were excavated at SWMU 25/Landfill 8 in 1997, three of which (THGLTA026, THGLTA027, and THGLTA028) are within the AOC 19 boundary (Figure 3.1). The contents of the three SWMU 25/Landfill 8 test pits are described in Table 4.1. The results of the geophysical survey conducted as part of the AOC 19 SI revealed 15 distinct anomalies, as depicted in Figure 4.1. However, all the anomalies, with the exception of A-14, are located along the perimeter road and/or the boundary of SWMU 25/Landfill 8<sup>6</sup>. The anomalies along the road are attributed to road fill and construction debris from the adjacent landfill, such as found in THGLTA026 (Table 4.1). Based on the results of the geophysical survey and the SWMU 25/Landfill 8 RFI, exploratory excavations were conducted at the southeastern anomaly (A-14), the northern anomaly (A-4), and the south central anomaly (A-13) as depicted in Figure 4.1 (HydroGeoLogic, 2001a).

<sup>&</sup>lt;sup>6</sup> HydroGeoLogic performed an RFI at SWMU 25/Landfill 8 in several phases from August 1997 through June 2000, and an interim remedial action was performed by IT in July and August 2000. SMWU25/Landfill 8 received closure in June 2001 under RRS 2 based on the findings presented in the Final RFI Report (HydroGeoLogic, 2001b).

The exploratory excavations were advanced over anomalies that were not within the boundary of SWMU 25/Landfill 8. A total of five exploratory excavations were advanced in August 2001 (THGLAOC1901 through THGLAOC1905). A magnetic locator was used in the field to confirm the location and removal of the anomalies. All metal debris removed from the excavations at AOC 19 was determined to be non-hazardous and was taken to a recycling facility off base for disposal. Photographs and schematics of each exploratory excavation conducted during the AOC 19 SI are presented as Figures 4.2 through 4.6. Table 4.1 presents a description of the materials encountered in both the exploratory excavations completed at AOC 19 and the three relevant test pits from the 1997 SWMU 25/Landfill 8 RFI.

Excavation THGLAOC1901 was located in the area of anomaly A-14, in the southeast corner of AOC 19 (Figure 4.1). Excavation THGLAOC1901 measured 6-feet long by 5-feet wide by 1-foot deep. The source of the geophysical anomaly at THGLAOC1901 was a 2-feet wide by 2.5-feet long by 0.25-inch thick steel plate, depicted in Figure 4.2. No staining, odor, nor PID detections were observed in the soil within the excavation; as a result exploratory excavation THGLAOC1901 was immediately backfilled with the excavated soil in the order that it was removed.

Excavation THGLAOC1902 was located in the area of anomaly A-13, in the south central portion of AOC 19 (Figure 4.1). The magnetic locator used prior to all excavations, identified potential buried metal approximately 20 feet east of the area where A-13 was located on Figure 4.1. Therefore an additional exploratory excavation to the four proposed in the Excavation WP (HydroGeoLogic, 2001a) was advanced in this area. Excavation THGLAOC1902 measured 9-feet long by 15-feet wide by 3-feet deep. The source of the anomaly at THGLAOC1902 consisted of a 20-foot long, 2-inch steel pipe and an approximately 1.5 x 2.5 foot piece of sheet steel, depicted in Figure 4.3. No staining, odor, nor PID detections were observed in the soil within the excavation; as a result exploratory excavation THGLAOC1902 was immediately backfilled with native soil in the order that it was removed.

Excavation THGLAOC1903 was located over anomaly A-13 (Figure 4.1). Excavation THGLAOC1903 measured 10-feet long by 7-feet wide by 2.5-feet deep. The magnetic locator received weak signals in this area, and only reinforced concrete, barbwire, and pieces of wire cable were found within the excavation. THGLAOC1903 is depicted in Figure 4.4. No staining, odor, nor PID detections were observed in the soil within the excavation; as a result exploratory excavation THGLAOC1903 was immediately backfilled with native soil in the order that it was removed.

Although two exploratory excavations were planned within anomaly A-4 in the Excavation WPs (HydroGeoLogic, 2001a), only one of the two planned excavations (THGLAOC1905) was advanced in the area of anomaly A-4 (Figure 4.1). This change was based on the visual observation of concrete at the top of the berm in the proposed area and the proximity of the proposed location to SWMU 25/Landfill 8. Therefore the second excavation proposed within anomaly A-4 (THGLAOC1904) was alternatively advanced in the central portion of AOC 19 over anomaly A-5 (Figure 4.1). The new location of excavation THGLAOC1904 was based

on anomalous readings at the base of the berm by the magnetic locator used in the field. Excavation THGLAOC1904 measured 15-feet long by 9-feet wide by 4.5-feet deep. The only items unearthed in excavation THGLAOC1904 consisted of a piece of scrap metal and wire cable, shown in Figure 4.5. No staining, odor, nor PID detections were observed in the soil within the excavation; as a result exploratory excavation THGLAOC1904 was immediately backfilled with native soil in the order that it was removed.

THGLAOC1905 was excavated in the area of anomaly A-4 in the north central area of AOC 19. Excavation THGLAOC1905 measured 13-feet long by 21-feet wide by 3-feet deep. The source of the geophysical anomaly at THGLAOC1905 was construction debris which included 3 crushed, rusted, and empty 55-gallon drums; 2 crushed, rusted, and empty 5-gallon buckets; nails; a large amount of reinforced concrete; roofing tar; resin; glass; metal wire; and wood. The excavation and objects removed are depicted in Figure 4.6. No staining, odor, nor PID detections were observed in the soil within the excavation, stockpile, or around and inside the drums and buckets. However, based on the contents of the unearthered materials, two soil samples were collected to characterize the soil within the excavation. Soil sample THGLAOC1905-02 was collected from the excavation floor (3-feet below ground surface [bgs]) beneath the location where the drums were discovered. This sample was analyzed for Appendix IX VOCs (SW8260B), SVOCs (SW8270C), and metals/mercury (SW6010B/7000)<sup>7</sup>. The second soil sample was collected from the stockpile for waste characterization and analyzed for reactivity (SW846, Chapter 7), ignitability (SW1020A), corrosivity (SW1110), total petroleum hydrocarbons (TNRCC method TX1005), VOCs (SW8260B), and metals (SW6010B/7000A). The analysis of these samples was expedited by the analytical laboratory. The stockpiled soil was covered and the open excavation was secured until the results were received. Based on the analytical results of the stockpiled soil, the excavation was backfilled with the excavated soil in the order that it was removed.

No concentrations of metals or VOCs were detected above RRS 1 values in the soil samples collected at THGLAOC1905. The following SVOC constituents were detected above RRS 1 concentrations in the subsurface soil sample collected from the floor of THGLAOC1905:

- bis(2-Ethylhexyl)phthalate was detected at 0.66 milligrams per kilogram (mg/kg) in the soil sample collected from the floor of test pit THGLAOC1905. This result is above the RRS 1 of 0.33 mg/kg and the MSC of 0.6 mg/kg. Analyzing an SPLP extract of sample THGLAOC1905-02 developed a site-specific MSC of 0.66 mg/kg. The site-specific MSCs for AOC 19 are listed in Table 4.2.
- PAHs are a class of compounds represented by 16 analytes on the SVOC analyte list. Twelve of these compounds were detected above RRS 1 in the sample collected from the floor of test pit THGLAOC1905. Anthracene; benzo[g,h,i]perylene; chrysene; fluoranthene; phenanthrene; and pyrene were detected above the associated RRS 1 values, but below the associated RRS 2 values. Benzo[a]anthracene; benzo[a]pyrene:

<sup>&</sup>lt;sup>7</sup> Additional analyses were added to those proposed in the Excavation WP in order to more completely characterize the soil beneath the materials uncovered in THGLAOC1905.

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benzo[b]fluoranthene; benzo[k]fluoranthene; dibenzo[a,h]anthracene; and indeno[1,2,3-cd]pyrene were detected above the associated RRS 2 values. Site-specific MSCs were developed for these six compounds by analyzing an SPLP extract of this sample (Table 4.2).

The analytical results of sample THGLAOC1905-02 are listed in Table 4.4 and discussed in Section 4.4.

# 4.2 LITHOLOGIC FINDINGS

A total of four soil borings, BHGLAOC1901 through BHGLAOC1904, were initially advanced at AOC 19 (Figure 4.1). Based on the results of Phase I and following completion of the geophysical survey in August 2001, six additional soil borings, BHGLAOC1905 through BHGLAOC1910, were advanced at AOC 19. BHGLAOC1905 and BHGLAOC1908 were characterization borings added to the Phase II sampling plan based upon the excavation findings in order to ensure that any construction debris within the bermed area along the road did not pose a threat to human health or the environment. Borings BHGLAOC1909 and BHGLAOC1910 were added to the sampling plan in order to delineate the constituents detected in the floor sample from THGLAOC1905, and three additional borings (BHGLAOC1911 through BHGLAOC1913) were added in December 2001 in order to achieve delineation of the August 2001 analytical results (see Section 3.2.4.3).

As previously mentioned in Section 3.0, drilling locations were determined based on accessibility, utility locations, geophysical survey results, and topography, which slopes downward toward Farmer's Branch Creek in a southerly direction. The placement of downard crossgradient monitoring wells WHGLTA050, WHGLTA051, and WHGLTA052, was constrained by a debris area that did not allow for drill rig access near the NAS Fort Worth JRB fence line, depicted in Figure 3.1. The debris was a result of ongoing construction and renovation activities at the Carswell golf course.

No debris or suspected landfill materials were encountered in any of the AOC 19 soil borings. The only construction debris encountered was within exploratory excavation THGLAOC1905 (August 2001), and THGLTA026, THGLTA027, and THGLTA028 from the SWMU 25/Landfill 8 RFI investigation in 1997. Boring logs are presented as Appendix F, and the contents of the exploratory excavations are presented in Table 4.1.

The surface of AOC 19 is covered by grass with a bermed area at the north and northwestern edge that follows the curve of Perimeter Road, and then levels out to the south and to the east. South of AOC 19 beyond the NAS Fort Worth JRB fence line, the ground surface drops off into Farmers Branch Creek. The depth to bedrock at AOC 19 ranges from 7 feet to 12.5 feet bgs. Water table elevations ranged from 5.5 feet to 11 feet bgs.

The lithology of AOC 19 was analyzed using a southwest-northeast transect along borings WHGLTA801, BHGLAOC1905, BHGLAOC1908, and BHGLAOC1910, depicted as cross-

section A-A' in Figure 4.7. Boring WHGLTA801 exhibited fill material to a depth of 3 feet bgs, overlying silty clay between 3 and 7 feet bgs. A clayey gravel layer was encountered between 7 and 11 feet, overlying clayey sandy gravel between 11 and 14 feet bgs. Refusal at bedrock was reached at 14.5 feet bgs. Boring BHGLAOC1905 exhibited a layer of concrete and fill material from the surface to a depth of 3 feet bgs followed by a layer of silty clay between 3 and 6 feet bgs. A sand and gravel layer was encountered between 6 and 8 feet bgs, overlying clayey gravelly sand between 8 and 10.5 feet bgs, with refusal at 10.5 feet bgs. Boring BHGLAOC1908 also exhibited fill material from the ground surface to a depth of 3 feet bgs followed by silty clay from 3 to 6 feet bgs, overlying clay between 6 and 12 feet bgs, and weathered limestone from 12 and 12.5 feet bgs, reaching refusal at 12.5 feet bgs. Boring BHGLAOC1910 exhibited fill material from the ground surface to a depth of 8 feet bgs, overlying silty clay with limestone gravel between 8 and 9 feet bgs, transitioning to silty sand and gravel from 9 to 12 feet bgs. Boring BHGLAOC1910 was terminated at 12 feet bgs since it was advanced as a delineation boring for the 5- and 10-foot intervals of sample THGLAOC1905. Boring logs are presented in Appendix F.

The lithology at AOC 19 was analyzed using a west-east transect along borings BHGLTA812, BHGLAOC1905, BHGLTA814, BHGLAOC1902, and WHGLTA050, depicted by crosssection B-B' in Figure 4.7. Boring BHGLTA812 exhibited fill material from the ground surface to a depth of 11 feet bgs overlying silty clay between 11 and 13 feet bgs. A gravelly clay layer was encountered between 13 and 17 feet, which overlies a layer of sandy clay between 17 and 21 feet bgs, with silty gravel from 21 to 23 feet bgs. Boring BHGLTA812 was terminated at 23 feet bgs when the water table was encountered. Boring BHGLAOC1905 similarly exhibited a layer of concrete and fill material from the surface to a depth of 3 feet bgs overlying silty clay between 3 and 6 feet bgs. This layer is overlying sand and gravel between 6 and 8 feet bgs and clayey gravelly sand between 8 and 10.5 feet bgs, reaching refusal at 10.5 feet bgs. Boring BHGLTA814 also exhibited fill material from the ground surface to a depth of 4 feet bgs and silty clay between 4 and 10 feet bgs, however, a layer of gravelly clay was encountered from 10 to 11 feet bgs before refusal was reached at 11 feet bgs. BHGLAOC1902 exhibited fill material from the ground surface to a depth of 2.5 feet bgs overlying a thick layer of sandy clayey silt between 2.5 and 8 feet bgs. This layer is overlying silty sand with clay and gravel from 8 to 11 feet bgs. Boring BHGLAOC1902 was terminated at 11 feet bgs as the water table was reached at 9.5 feet bgs. WHGLTA050 was a shallow boring with a layer of fill material from the ground surface to a depth of 2 feet bgs overlying silty clay with gravel between 2 and 4 feet bgs followed by a layer of clayey sand from 4 to 5.5 feet bgs. Saprolite was encountered from 5.5 to 7 feet bgs, with refusal in limestone bedrock at 7 feet bgs. Boring logs are included in Appendix F.

Groundwater was encountered from approximately 5.5 to 11 feet bgs at AOC 19. Groundwater flow direction across the site trends to the south-southeast towards Farmers Branch Creek.

# 4.3 SURFACE SOIL DETECTIONS

Surface soil samples were collected for characterization purposes from Phase I borings BHGLAOC1901 through BHGLAOC1904, and Phase II borings BHGLAOC1905 and BHGLAOC1908. All characterization samples were analyzed for the list of analyses presented in Section 3.2.2. As described below, boring BHGLAOC1902 contained the only surface soil sample with an analyte concentration above the associated RRS 1 value. There were no inorganic analytes detected above background in any surface soil characterization samples, and TCE was the only organic constituents detected above RRS 1. Soil sampling locations are depicted in Figure 4.8. Soil sampling results are listed in Table 4.3.

The surface soil samples were collected for delineation purposes from boring BHGLAOC1910, and the borings advanced to install monitoring wells WHGLTA050 and WHGLTA051. The delineation surface soil sample collected at BHGLAOC1910 was analyzed for PAHs by method SW8270C; the delineation surface soil samples collected at WHGLTA050 and WHGLTA051 were analyzed for TCE by method SW8260B. There were no analytes detected above RRS 1 in the delineation surface soil samples. All analytes detected in surface soil samples are presented in Table 4.3. Analytes detected above RRS 1 concentrations are depicted in Figure 4.8.

# 4.3.1 Inorganic Constituents

No concentrations of metals were detected above RRS 1 in any of the surface soil samples collected at AOC 19.

# 4.3.2 Organic Constituents

No concentrations of SVOCs were detected above RRS 1 in surface soils at AOC 19. The following VOC was detected above RRS 1 in the surface soil samples collected at AOC 19:

• TCE was detected at 0.019 mg/kg in the surface soil sample collected from boring BHGLAOC1902. This result is only slightly above the RRS 1 concentration (0.005 mg/kg) and well below the MSC (0.5 mg/kg) for this analyte.

## 4.4 SUBSURFACE SOIL DETECTIONS

Characterization subsurface soil samples were collected for chemical analysis at seven locations at AOC 19: Phase I borings BHGLAOC1901 through BHGLAOC1904; Phase II borings BHGLAOC1905 and BHGLAOC1908; and from the bottom of exploratory excavation THGLAOC1905. All characterization samples were analyzed for the list of analyses presented in Section 3.2.2.

Delineation subsurface soil samples were collected from borings BHGLAOC1906, BHGLAOC1910, and BHGLAOC1911 through BHGLAOC1913.

Delineation subsurface soil samples were also collected from the borings advanced to install monitoring wells WHGLTA050 through WHGLTA052. The delineation subsurface soil samples collected at borings BHGLAOC1906, BHGLAOC1913, and well installation borings WHGLTA050 through WHGLTA052 were analyzed for TCE by method SW8260B. The delineation subsurface soil samples collected at BHGLAOC1909 through BHGLAOC1912 were analyzed for SVOCs by method SW8270C. All analytes detected in subsurface soil samples are presented in Table 4.4, and those analytes detected above RRS 1 are depicted in Figure 4.8. Analytical results indicate concentrations of two metals (arsenic and chromium), two VOCs (cis-1,2-dichloroethene and TCE), and several SVOCs (bis(2-ethylhexyl)phthalate and PAHs) were detected above RRS 1 in the subsurface soils at AOC 19.

One confirmation sample, BHGLAOC1907, was collected in order to confirm the TCE detection at the 10-foot interval of BHGLAOC1901. TCE was not detected in this confirmation sample. This soil sampling location is depicted in Figure 4.8, and the result is listed in Table 4.4.

# 4.4.1 Inorganic Constituents

The following metals were detected above RRS 1 concentrations in the subsurface soil samples collected at AOC 19:

- Arsenic was detected at 6.7 mg/kg in the subsurface soil sample collected from the 10-foot interval of boring BHGLAOC1901; this detection of arsenic is slightly above both the background value and the MSC (6.58 mg/kg).
- Chromium was detected at 17.7 mg/kg in the subsurface soil sample collected from the 5-foot interval of boring BHGLAOC1908; this detection of chromium is slightly above both the background value and the MSC (16.31 mg/kg).

# 4.4.2 Organic Constituents

The following organic constituents were detected above RRS 1 concentrations in the subsurface soil samples collected at AOC 19:

- cis-1,2-Dichloroethene was detected at 0.007 mg/kg in the soil sample collected from the 10-foot interval of boring BHGLAOC1908. This result is only slightly above the RRS 1 concentration (0.005 mg/kg) and well below the MSC (7 mg/kg) for this analyte.
- Trichloroethene was detected in the following subsurface soil samples: the 10-foot interval of boring BHGLAOC1901 (0.019 mg/kg); the 5-foot interval of boring BHGLAOC1902 (0.008 mg/kg); the 5-foot interval of boring BHGLAOC1904 (0.009); the 5-foot interval of boring BHGLAOC1905 (0.006 mg/kg); the 5- and 10-foot intervals of boring BHGLAOC1906 (0.033 mg/kg and 0.008 J mg/kg, respectively);

the 10-foot interval of boring BHGLAOC1908 (0.030 mg/kg); and the 5- and 10-foot intervals of boring BHGLAOC1913 (0.051 J mg/kg and 0.036 mg/kg, respectively). Most of these results are only slightly above the RRS 1 concentration (0.005 mg/kg). All concentrations are well below the MSC (0.5 mg/kg) for this analyte.

- bis(2-Ethylhexyl)phthalate was detected at a concentration of 0.42 mg/kg in the soil sample collected from the 10-foot interval of boring BHGLAOC1905 and at 0.66 mg/kg in the soil sample collected from the floor of test pit THGLAOC1905 (Section 4.1). These results are above the RRS 1 of 0.33 mg/kg. Although the result from BHGLAOC1905 is below the MSC (0.6 mg/kg) for this analyte, the result from THGLAOC1905 exceeded the RRS 2 value. As a result, an SPLP extract of sample THGLAOC1905 was analyzed and a site-specific MSC of 0.66 mg/kg was developed. Site-specific MSCs for AOC 19 are listed in Table 4.2.
- PAHs were detected above RRS 1 in the 10-foot interval (or its duplicate) of boring BHGLAOC1911. Benzo[g,h,i]perylene; chrysene; fluoranthene; phenanthrene; and pyrene were detected above the associated RRS 1 values, but below the associated RRS 2 values, at BHGLAOC1911. Benzo[a]anthracene; benzo[a]pyrene; benzo[b] fluoranthene; benzo[k]fluoranthene; dibenzo[a,h]anthracene; and indeno[1,2,3-cd]pyrene were detected above the RRS 2 value at exploratory excavation THGLAOC1905, and site-specific MSCs were developed for these six compounds by analyzing an SPLP extract of this sample. These compounds were detected above RRS 1 but below the site-specific MSC in the sample from boring BHGLAOC1911, with the exception of dibenzo[a,h]anthracene (which was below RRS 1). Site-specific MSCs for AOC 19 are listed in Table 4.2.

# 4.5 GROUNDWATER DETECTIONS

Groundwater samples were collected for chemical analysis from five monitoring wells at AOC 19: WHGLTA004, WHGLTA050, WHGLTA051, WHGLTA052, and WHGLTA801. Monitoring wells WHGLTA050, WHGLTA051, and WHGLTA052 were installed as part of Phase II of the SI for cross- and downgradient groundwater characterization. WHGLTA004 and WHGLTA801 are pre-existing monitoring wells located upgradient and within AOC 19 (and also within SWMU 25/Landfill 8), respectively. Three rounds of groundwater sampling were conducted in February, April, and June 2001. All groundwater samples were analyzed for TCE (SW8260B) based on the soil sampling results from Phase I. Analytical results from the groundwater investigation are presented in Table 4.5. The groundwater sampling locations and results above the RRS 1 for TCE are depicted in Figure 4.9. These results indicate the highest concentrations of TCE were detected in the upgradient monitoring well (WHGLTA004) at AOC 19.

The following concentrations of TCE were detected above RRS 2 in the groundwater samples collected at AOC 19:

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• TCE was detected in all five wells in concentrations above RRS 2 during all three rounds of sampling. The highest detections of TCE were detected in WHGLTA004, the upgradient well located in SWMU 25, at concentrations of 0.53 mg/L in February 2001; 0.45 mg/L in April 2001; and 0.66 mg/L in June 2001. The lowest detections of TCE were detected in WHGLTA050, a cross- and downgradient monitoring well, at concentrations of 0.15 J mg/L in February 2001; 0.17 mg/L in April 2001; and 0.26 mg/L in June 2001. WHGLTA051, another downgradient monitoring well, had the second lowest detections of TCE at 0.19 mg/L in February 2001; 0.17 mg/L in April 2001; and 0.31 mg/L in June 2001. WHGLTA801, a monitoring well within AOC 19 (and within SWMU 25/Landfill 8), had detections of 0.36 mg/L in February 2001; 0.15 mg/L in April 2001; and 0.34 mg/L in June 2001. WHGLTA052, the downgradient monitoring well between AOC 19 and Farmers Branch Creek, had detections of 0.3 mg/L in February 2001 and April 2001; and 0.57 mg/L in June 2001.

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**TABLES** 

# Table 4.1 Excavation Results AOC 19 NAS Fort Worth JRB, Texas

Excavation	Excavation	,
Location	Dimensions	Contents
THGLAOC1901	6' x 5' x 1'	A 2' x 2.5' x 0.25" steel plate. No staining, odor, or elevated PID readings were encountered. Excavation was backfilled with native soil.
THGLAOC1902	9' x 15' x 3'	A 20' long 2" pipe No staining, odor, or elevated PID readings were encountered. Excavation was backfilled with native soil.
THGLAOC1903	10' x 7' x 2.5'	Reinforced concrete, barbwire, and wire cable No staining, odor, or elevated PID readings were encountered Excavation was backfilled with native soil.
THGLAOC1904	15' x 9' x 4.5'	Scrap metal and wire cable. No staining, odor, or elevated PID readings were encountered. Excavation was backfilled with native soil.
THGLAOC1905	13' x 21' x 3'	Various construction type debris consisting of three crushed and empty drums, a crushed and empty paint can, nails, reinforced concrete, roofing tar, resin, glass, metal wire, and wood No odor, staining, or elevated PID readings were detected around or inside the excavation or its contents. A soil sample was collected and analyzed for VOCs (SW8260B), SVOCs (SW8270C), and metals/mercury (SW6010B/7000) from the excavation floor beneath where the crushed drums were located After analytical results were received, the excavation was backfilled with native soil.
THGLTA026*	40' x 3' x 6'	Construction debris, large pieces of asphalt and concrete, and the footing of an old building.
THGLTA027*	40' x 2' x 2'	Concrete at surface and sand encountered at 2 feet bgs.
THGLTA028*	40' x 2' x 9'	No waste materials were encountered.

## Notes:

\*Advanced in 1997 as part of the SWMU 25/Landfill 8 RFI bgs = below ground surface

NAS Fort Worth JRB, Texas Table 4.2
Site-Specific MSCs
AOC 19

•				DDC 1	, DDG 3	Doguile	CW Ind	Manage of 100	Revised
Location	Depth	Depth Method	Analyte	(mg/kg).	(mg/kg)	(mg/kg)	(mg/L)	or Lr nesum (mg/L)	(mg/kg)
THGLAOC1905	2.5	2.5' SW8270C Benzo[a]a	Benzo[a]anthracene	0 33	0.33	[(2)]	0.01	QN	2
THGLAOC1905	2.5	2.5' SW8270C bis(2-Ethy	bis(2-Ethylhexyl)phthalate	0.33	90	[(99.0)]	0 01	QN	99 0
THGLAOC1905	2.5	2.5' SW8270C Benzo[k]f	Benzo[k]fluoranthene	0 33	0 39	[(1.4)]	0.01	ND	1.4
THGLAOC1905	2.5	2.5' SW8270C Benzo[a]	Benzo[a]pyrene	0 33	0 33	[(8.1)]	0.01	ND	1.8
THGLAOC1905	2.5	2.5' SW8270C Indeno[1,	Indeno[1,2,3-c,d]pyrene	0 33	0 33	[(1.1)]	0.01	QN	1.1
THGLAOC1905	2.5'	2.5' SW8270C Dibenz[a,	Dibenz[a, h]anthracene	0 33	0.33	[(0.43)]	0.01	ND	0.43
THGLAOC1905	2.5	2.5' SW8270C Benzo[b]t	Benzo[b]fluoranthene	0.33	0.33	[(2.2)]	0.01	QN	2.2

Notes RRS 1 = RRS 2 =

Risk Reduction Standard 1 Risk Reduction Standard 2

GW-Ind = TNRCC Groundwater MSC for Industrial Use Values above RRS 1 are bold and enclosed in ( ) Values above RRS 2 are bold and enclosed in [( )] medium-specific concentration MSC =

analyte not detected

synthetic precipitation leaching procedure

NAS Fort Worth JRB, Texas Surface Soil Detections

	C C C C C C C C C C C C C C C C C C C				BHGLAOC1901 00 ft	BHGLAOC1901 00 ft	BHGLAOC1902 00 ft
Method	Analyte	RRS 1	RRS 2	Unit	2000-05-12	2000-05-26	2000-05-15
SW6010B	Arsenic	5.85	5.85	mg/kg	4.9 F	NA	4.9
SW6010B	Barium	233	233	mg/kg	44.6	NA	75 J
SW6010B	Beryllium	1.02	1.02	mg/kg	0 84	NA	1
SW6010B	Cadmium	0 556	0.556	mg/kg	-	NA	0.24 F
SW6010B	Chromium, total	25 86	25.86	mg/kg	12.8	NA	20 3 J
SW6010B	Cobalt	11.05	613.2	mg/kg	4.6 F	NA	5.5 F
SW6010B	Copper	17.37	130	mg/kg	7.4 F	NA	10.5
SW6010B	Nickel	14.6	204.4	mg/kg	10 F	NA	13.2 J
SW6010B	Tin	10	6132	mg/kg	1.2 F	NA	
SW6010B	Vanadium	46 3	71.54	mg/kg	31.1 F	NA	18.9£
SW6010B	Zinc	38 8	3066	mg/kg	22.7 F	NA	36.2
SW7041	Antimony	0.56	9.0	mg/kg	-	NA	
SW7421	Lead	30.97	30.97	mg/kg	14.9 F	NA	10.4
SW7471A	Mercury	0.14	0.151	mg/kg		NA	••
SW8260B	Trichloroethene (TCE)	0.005	0.5	mg/kg	NA	4.1	(0.019)
SW8270C	Benzyl alcohol	0.33	3066	mg/kg	-	NA	
SW8270C	Benzyl butyl phthalate	0.33	2044	mg/kg	0.28 F	NA	1

RRS 1 = Risk Reduction Standard 1 RRS 2 = Risk Reduction Standard 2 Values above RRS 1 are bold and enclosed in ()

analyte not detected

not analyzed

estimated value below the reporting limit estimated value above the reporting limit

NAS Fort Worth JRB, Texas Surface Soil Detections Table 4.3 (continued)

N. C. L. L. J.	1	n D G 1	, out	11	BHGLAOC1903 00 ft	E	BHG	BHGLAOC1905 00 ft
DOUTHIN	Ananyte	KKS I	KKS 2	OIIII	CT-CA-MAZ	dng cr-co-moz	CT-CD-0007	700T-08-20
SW6010B Arsenic	Arsenic	5.85	5.85	mg/kg	3 F	4	28F	4 9
SW6010B	Barium	233	233	mg/kg	66.1 J	70.5 J	81.1 J	78.1
SW6010B Beryllium	Beryllium	1.02	1 02	mg/kg	0.44 J	0.84	9.0	0.92
SW6010B Cadmium	Cadmium	0.556	0 556	mg/kg	0.21 F	0.29 F	0.27 F	-
SW6010B	SW6010B Chromium, total	25.86	25 86	mg/kg	12.8 J	14.9 J	13.1 J	16.3
SW6010B Cobalt	Cobalt	11.05	613.2	mg/kg	3.3 F	4.9	3 F	5.3 F
SW6010B Copper	Copper	17.37	130	mg/kg	5.4 F	10.2	5.7 F	10.9
SW6010B Nickel	Nickel	14.6	204.4	mg/kg	8.1F	10.7 J	8 J	11.5
SW6010B	Tm	10	6132	mg/kg	t =			-
SW6010B Vanadium	Vanadium	46.3	71.54	mg/kg	26.5 F	29.1 J	25.5 J	31.5
SW6010B Zinc	Zınc	38.8	3066	mg/kg	17 2 F	26.2 J	17.7 F	
SW7041	Antimony	0 56	9.0	mg/kg	1	1		
SW7421	Lead	30 97	30.97	mg/kg	5.6	8.9	691	12.7
SW7471A Mercury	Mercury	0.14	0.151	mg/kg	à I	-	i.	-
SW8260B	SW8260B Trichloroethene (TCE)	0 005	0.5	mg/kg	;	;	0 005 J	1
SW8270C	SW8270C Benzyl alcohol	0.33	3066	mg/kg	ļ.	•		
SW8270C	SW8270C Benzyl butyl phthalate	0 33	2044	mg/kg	7.	-	1	-

Notes: RRS 1 = Risk Reduction Standard 1 RRS 2 = Risk Reduction Standard 2

Values above RRS 1 are bold and enclosed in ()

= analyte not detected

not analyzed

estimated value below the reporting limit R R 7

×.

NAS Fort Worth JRB, Texas Surface Soil Detections Table 4.3 (continued)

######################################	4	200	9	j	BHGLAOC1908 00 ft	BHG	WHGLTA050 00 ft	WHGLTA051 00 ft
Method	Anaiyte	KKS 1	KRS 2	Cnit	2001-08-21	2001-08-22	2001-02-07	2001-02-07
SW6010B	Arsenic	5.85	5.85	mg/kg	42F	NA	NA	NA
SW6010B Barium	Barium	233	233	mg/kg	80.3	NA	NA	NA
SW6010B	SW6010B Beryllium	1.02	1.02	mg/kg	0 79	NA	NA	NA
SW6010B	SW6010B Cadmum	0 556	0.556	mg/kg	-	NA	NA	NA
SW6010B	SW6010B Chromium, total	25.86	25.86	mg/kg	12.8	NA	NA	NA
SW6010B	Cobalt	11.05	613.2	mg/kg	5.4 F	NA	NA	NA
SW6010B Copper	Copper	17.37	130	mg/kg	8.6 F	NA	NA	NA
SW6010B Nickel	Nickel	14.6	204.4	mg/kg	10.8	NA	NA	NA
SW6010B Tin	Tin	10	6132	mg/kg	-	NA	NA	NA
SW6010B	SW6010B Vanadıum	46.3	71 54	mg/kg	25 1 F	NA	NA	NA
SW6010B Zinc	Zinc	38.8	3066	mg/kg	1	NA	NA	NA
SW7041	Antimony	0.56	9.0	mg/kg	0 43 F	NA	NA	NA
SW7421	Lead	30 97	30.97	mg/kg	11 1	NA	NA	NA
SW7471A Mercury	Mercury	0 14	0.151	mg/kg	0.013 F	NA	NA	NA
SW8260B	SW8260B Trichloroethene (TCE)	0.005	0.5	mg/kg		NA		
SW8270C	SW8270C Benzyl alcohol	0.33	3066	mg/kg		1	NA	NA
SW8270C	SW8270C Benzyl butyl phthalate	0.33	2044	mg/kg	ŀ	-	NA	NA

Notes

RRS 1 = Risk Reduction Standard 1

RRS 2 = Risk Reduction Standard 2

Values above RRS 1 are bold and enclosed in ()

= analyte not detected

N H L

N II N

not analyzed estimated value below the reporting limit estimated value above the reporting limit

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Table 4.4
Subsurface Soil Detections
AOC 19
NAS Fort Worth JRB, Texas

,					BHGLAOC1901 05 ft	BHGLAOC1901 05 ft BHGLAOC1901 10 ft	BHC1 AOC1901 10 ft
Method	Analyte	RRS 1	RRS 1 RRS 2	Unit	2000-05-12	2000-05-26	2000-05-12
SW6010B Arsenic	Arsenic	6.58	6.58	mg/kg	4.4 F	NA	[(6.7)]
SW6010B	Barum	128.1	200	mg/kg	6'08	NA	33 3 F
SW6010B Beryllium	Beryllium	1.13	1.13	mg/kg		NA	
SW6010B Cadmium	Cadmium	0.59	0 59	mg/kg	0.07 F	NA	0.13 F
SW6010B	SW6010B Chromium, total	16 31	16.31	mg/kg	12.8	NA	7.4 F
SW6010B Cobalt	Cobalt	6.19	613 2	mg/kg	5.2 F	NA	29F
SW6010B Copper	Copper	13.72	130	mg/kg	5.3 F	NA	42F
SW6010B Nickel	Nickel	19.76	204 4	mg/kg	11 1	NA	76F
SW6010B Tin	Tin	10	6132	mg/kg	1.6 F	NA	1 F
SW6010B Vanadıum	Vanadıum	37.4	71.54	mg/kg	29.5 F	NA	22.6 F
SW6010B	Zinc	31.3	3066	mg/kg	21 F	NA	9.8 F
SW7041	Antimony	0.712	0.712	mg/kg		NA	-
SW7421	Lead	12.66	12 66	mg/kg	8.8	NA	4.7
SW7471A Mercury	Mercury	0.035	0.1513	mg/kg	•	NA	
SW8260B	SW8260B cis-1,2-Dichloroethene	0.005	7	mg/kg	NA		NA
SW8260B	SW8260B Trichloroethene (TCE)	0.005	0.5	mg/kg	NA	0 004 F	NA
SW8270C	SW8270C Acenaphthene	0.33	613.2	mg/kg	•	NA	-
SW8270C	SW8270C Anthracene	0.33	3066	mg/kg	-	NA	
SW8270C	SW8270C Benzo[a]anthracene	0.33	0.33	mg/kg		NA	:
SW8270C	SW8270C Benzo[a]pyrene	0.33	0.33	mg/kg	-	NA	ı
SW8270C	SW8270C Benzo[b]fluoranthene	0.33	0,33	mg/kg	3 4	NA	1
SW8270C	SW8270C Benzolg, h, i]perylene	0.33	306.6	mg/kg	-	NA	-
SW8270C	SW8270C Benzo[k]fluoranthene	0.33	0 392	mg/kg	••	NA	i,
SW8270C	SW8270C Benzyl alcohol	0.33	3066	mg/kg	•	NA	i.

NAS Fort Worth JRB, Texas Subsurface Soil Detections Table 4.4 (continued)

Method	Analyte	RRS 1	RRS 1 RRS 2 Unit	Unit	BHGLAOC1901 05 ft 2000-05-12	BHGLAOC1901 05 ft BHGLAOC1901 05 ft BHGLAOC1901 10 ft 2000-05-12	BHGLAOC1901 10 ft 2000-05-12
SW8270C	hthalate	0.33	9.0	mg/kg	-	NA	
SW8270C Chrysene	Chrysene	0.33	3 92	mg/kg		NA	1
SW8270C	SW8270C Dibenz[a,h]anthracene	0.33	0.33	mg/kg	l i	NA	
SW8270C	SW8270C Dibenzofuran	0.33	40.88 mg/kg	mg/kg	-	NA	
SW8270C	SW8270C Fluoranthene	0.33	408.8   mg/kg	mg/kg	-	NA	
SW8270C Fluorene	Fluorene	0.33	408.8 mg/kg	mg/kg	•	NA	
SW8270C	SW8270C Indeno[1,2,3-c,d]pyrene	0 33	0.33	mg/kg	-	NA	-
SW8270C	SW8270C Naphthalene	0 33	204 4   mg/kg	mg/kg	ľ	NA	
SW8270C	SW8270C Phenanthrene	0.33	0.33   306.6   mg/kg	mg/kg	-	NA	
SW8270C Pyrene	Pyrene	0.33	0.33 306.6 mg/kg	mg/kg	î ș	NA	

MOICS.			
RRS 1	l	Risk Reduction	Sa
RRS 2	ij	Risk Reduction	5

Values above RRS 1 are bold and enclosed in () Values above RRS 2 are bold and enclosed in [()] andard 2

estimated value below the reporting limit estimated value above the reporting limit not analyzed

analyte not detected · X u · . 88

Table 4.4 (continued)
Subsurface Soil Detections
AOC 19
NAS Fort Worth JRB, Texas

,	* **		4			1) SO (t	BHG
SW6010B	Arsenic	6 58	6.58	mg/kg	07-c0-007	5.5	2.5 F
SW6010B	Barium	128.1	200	mg/kg	NA	62 J	45.3 J
SW6010B	Beryllum	1.13	1.13	mg/kg	NA	0.35 J	0 38 J
SW6010B	Cadmium	0.59	0.59	mg/kg	NA	0 26 F	0.18 F
SW6010B	Chromium, total	16 31	16 31	mg/kg	NA	10.5 J	10.3 J
SW6010B	Cobalt	6.19	613.2	mg/kg	NA	39F	2 F
SW6010B	Copper	13 72	130	mg/kg	NA	4 1 F	3.8 F
SW6010B	Nickel	92 61	204 4	mg/kg	NA	7.9 F	6.7 F
SW6010B	Tin	10	6132	mg/kg	NA	-	
SW6010B	Vanadium	37 4	71 54	mg/kg	NA	28.9 J	27 J
SW6010B	Zinc	313	3066	mg/kg	NA	13.5 F	13.5 F
SW7041	Antimony	0.712	0 712	mg/kg	NA	;	•
SW7421	Lead	12 66	12.66	mg/kg	NA	4.9	5.9
SW7471A	Mercury	0.035	0.1513	mg/kg	NA	í !	p. t
SW8260B	cis-1,2-Dichloroethene	0.005	7	mg/kg	0 005	-	-
SW8260B	Trichloroethene (TCE)	0.005	0.5	mg/kg	(0.019)	(0.008)	0 005
SW8270C	Acenaphthene	0 33	613.2	mg/kg	NA		•
SW8270C	Anthracene	0 33	3066	mg/kg	NA	4 -	-
SW8270C	Benzo[a]anthracene	0.33	0.33	mg/kg	NA		
SW8270C	SW8270C Benzo[a]pyrene	0 33	0 33	mg/kg	NA	ā E	1
SW8270C	Benzo[b]fluoranthene	0 33	0 33	mg/kg	NA		-
SW8270C	Benzo[g,h,i]perylene	0 33	306.6	mg/kg	NA		•
SW8270C	Benzo[k]fluoranthene	0 33	0.392	mg/kg	NA	1	•
SW8270C	Benzyl alcohol	0 33	3066	mg/kg	NA		
SW8270C	SW8270C bis(2-Ethylhexyl)phthalate	0 33	90	mg/kg	NA		

NAS Fort Worth JRB, Texas Subsurface Soil Detections Table 4.4 (continued) AOC 19

	· ·						2
	*	×		¢.	BHGLAOC1901 10 ft	BHGLAOC1901 10 ft BHGLAOC1902 05 ft BHGLAOC1903 05 ft	BHGLAOC1903 05 ft
Method	Analyte	RRS 1	RRS 1   RRS 2 UNIT	UNIT	2000-05-26	2000-05-15	2000-05-15
SW8270C	W8270C Chrysene	0 33	3.92	mg/kg	NA		• 1
SW8270C	W8270C Dibenz[a, h]anthracene	0.33	0.33	mg/kg	NA	,	
SW8270C	SW8270C Dibenzofuran	0.33	40.88	mg/kg	AN		
SW8270C	SW8270C Fluoranthene	0.33	408.8	408.8 mg/kg	NA	1	1
SW8270C Fluorene	Fluorene	0.33	408.8	408.8 mg/kg	NA	1	
SW8270C	SW8270C Indeno[1,2,3-c,d]pyrene	0.33	0.33	mg/kg	NA		
SW8270C	SW8270C Naphthalene	0.33	204 4	204 4 mg/kg	NA		9.8
SW8270C	W8270C Phenanthrene	0.33	306.6	306.6 mg/kg	NA	-	
SW8270C Pyrene	Pyrene	0 33	306.6 mg/kg	mg/kg	NA	;	

analyte not detected not analyzed II II II I X H I RRS 2 = Risk Reduction Standard 2
Values above RRS 1 are **bold** and enclosed in ()
Values above RRS 2 are **bold** and enclosed in [()] Risk Reduction Standard 1 Notes RRS 1 RRS 2

estimated value below the reporting limit estimated value above the reporting limit

Table 4.4 (continued)
Subsurface Soil Detections
AOC 19
NAS Fort Worth JRB, Texas

Method	Analyte	RRS 1	RRS 1 RRS 2	Unit	BHGLAOC1904 05 ft 2000-05-15	BHGLAOC1905 05 ft 2001-08-20	BHGLAOC1905 05 ft BHGLAOC1905 10 ft 2001-08-20
SW6010B	Arsenic	6 58	6 58	mg/kg	2.4 F	3.9 F	5.2
SW6010B	Barium	128.1	200	mg/kg	59 1 J	76.2	47.4
SW6010B	Beryllium	1 13	1 13	mg/kg	0.45 J	0.63	0.55
SW6010B	Cadmum	0.59	0.59	mg/kg	0.23 F	-	L t
SW6010B	Chromum, total	16.31	16.31	mg/kg	11.8 J	12 3	11.8
SW6010B	Cobalt	6.19	613 2	mg/kg	3 F	2 F	2.9 F
SW6010B	Copper	13.72	130	mg/kg	5.1 F	5.2 F	5.4 F
SW6010B	Nickel	19.76	204.4	mg/kg	8.7 J	7.4 F	7.4 F
SW6010B	Tin	10	6132	mg/kg	£ .	:	-
SW6010B	Vanadium	37.4	71.54	mg/kg	29 8 J	22.9 F	28.2
SW6010B	Zinc	31.3	3066	mg/kg	16 2 F		
SW7041	Antimony	0 712	0.712	mg/kg			-
SW7421	Lead	12.66	12.66	mg/kg	6.4	7.1	9.9
SW7471A	Mercury	0 035	0.1513	mg/kg	4		
SW8260B	cis-1,2-Dichloroethene	0 005	7	mg/kg	41-	••	4
SW8260B	Trichloroethene (TCE)	0.005	0.5	mg/kg	(0.009)	(0.006)	-
SW8270C	Acenaphthene	0.33	613.2	mg/kg		1	-
SW8270C	Anthracene	0.33	3066	mg/kg		1-	
SW8270C	Benzo[a]anthracene	0 33	0 33	mg/kg	f t	į.	
SW8270C	Benzo[a]pyrene	0.33	0.33	mg/kg		1	•
SW8270C	Benzo[b]fluoranthene	0 33	0.33	mg/kg	<b>.</b>	t h	1
SW8270C	Benzo[g,h,i]perylene	0.33	3066	mg/kg			-
SW8270C	Benzo[k]fluoranthene	0 33	0 392	mg/kg			
SW8270C	Benzyl alcohol	0 33	3066	mg/kg		-	
SW8270C	SW8270C bis(2-Ethylhexyl)phthalate	0 33	0.6	mg/kg			(0.42)

NAS Fort Worth JRB, Texas **Subsurface Soil Detections** Table 4.4 (continued) AOC 19

				~ .	BHGLAOC1904 05 ft	BHGLAOC1905 05 ft BHGLAOC1905 10 ft	BHGLAOC1905 10 ft
Method	Analyte	RRS 1	RRS 1   RRS 2   Unit	Unit	2000-05-15	2001-08-20	2001-08-20
SW8270C Chrysene	Chrysene	0.33	0.33 3 92 mg/kg	mg/kg	e de la		
SW8270C	SW8270C Dibenz[a,h]anthracene	0.33	0.33 0 33 mg/kg	mg/kg			
SW8270C	SW8270C Dibenzofuran	0 33 4	40.88 mg/kg	mg/kg	••	-	•
SW8270C	SW8270C Fluoranthene	0.33	0.33 408.8 mg/kg	mg/kg	•		
SW8270C Fluorene	Fluorene	0 33	408 8 mg/kg	mg/kg			
SW8270C	SW8270C Indeno[1,2,3-c,d]pyrene	0.33	0.33 mg/kg	mg/kg			
SW8270C	SW8270C Naphthalene	0.33	0.33 204.4 mg/kg	mg/kg			-
SW8270C	SW8270C Phenanthrene	0.33	0.33 306.6 mg/kg	mg/kg			
SW8270C Pyrene	Pyrene	0.33	0.33 306.6 mg/kg	mg/kg	45-49	77 -	

analyte not detected I Z H L RRS 1 = Risk Reduction Standard 1
RRS 2 = Risk Reduction Standard 2
Values above RRS 1 are bold and enclosed in ()
Values above RRS 2 are bold and enclosed in [()] Notes. RRS 1

estimated value below the reporting limit estimated value above the reporting limit not analyzed

Table 4.4 (continued)
Subsurface Soil Detections
AOC 19
NAS Fort Worth JRB, Texas

*			,		BHGLAOC1906 05 ft	BHGLAOC1906 10 ft	RHGLAOC1907 10 ft
Method	Analyte	RRS 1	RRS 2	Unit	2001-08-20	2001-08-20	
SW6010B	Arsenic	6 58	6.58	mg/kg	NA	NA	. NA
SW6010B	Barium	128.1	200	mg/kg	NA	NA	NA
SW6010B	Beryllium	1 13	1.13	mg/kg	NA	NA	NA
SW6010B	Cadmium	0.59	0.59	mg/kg	NA	NA	NA
SW6010B	Chromium, total	16.31	16.31	mg/kg	NA	NA	NA
SW6010B	Cobalt	6.19	613.2	mg/kg	NA	NA	NA
SW6010B	Copper	13.72	130	mg/kg	NA	NA	NA
SW6010B	Nickel	19.76	204.4	mg/kg	NA	NA	NA
SW6010B	Tin	10	6132	mg/kg	NA	NA	NA
SW6010B	Vanadium	37 4	71.54	mg/kg	NA	NA	NA
SW6010B	Zinc	31.3	3066	mg/kg	NA	NA	NA
SW7041	Antimony	0.712	0.712	mg/kg	NA	NA	NA
SW7421	Lead	12.66	12 66	mg/kg	NA	NA	NA
SW7471A	Mercury	0.035	0.1513	mg/kg	NA	NA	NA
SW8260B	cis-1,2-Dichloroethene	0.005	7	mg/kg	NA	NA	NA
SW8260B	Trichloroethene (TCE)	0.005	0.5	mg/kg	(0.033)	(0.008 J)	
SW8270C	Acenaphthene	0.33	613 2	mg/kg	NA	NA	NA
SW8270C	Anthracene	0.33	3066	mg/kg	NA	NA	NA
SW8270C	Benzo[a]anthracene	0 33	0 33	mg/kg	NA	NA	NA
SW8270C	Benzo[a]pyrene	0.33	0 33	mg/kg	NA	NA	NA
SW8270C	Benzo[b]fluoranthene	0.33	0.33	mg/kg	NA	NA	NA
SW8270C	Benzo[g, h, i]perylene	0 33	306 6	mg/kg	NA	NA	NA
SW8270C	Benzo[k]fluoranthene	0.33	0 392	mg/kg	NA	NA	NA
SW8270C	Benzyl alcohol	0 33	9908	mg/kg	NA	NA	NA
SW8270C	SW8270C bis(2-Ethylhexyl)phthalate	0 33	9.0	mg/kg	NA	NA	NA

NAS Fort Worth JRB, Texas Subsurface Soil Detections Table 4.4 (continued)

*					BHGLAOC1906 05 ft	BHGLAOC1906 10 ft BHGLAOC1907 10 ft	BHGLAOC1907 10 ft
Method	Analyte	RRS 1	RRS 1 RRS 2	Unit	2001-08-20	2001-08-20	2001-08-20
SW8270C Chrysene	Chrysene	0.33	3.92	mg/kg	NA	NA .	NA
SW8270C	SW8270C Dibenz[a, h]anthracene	0.33	0.33	mg/kg	NA	NA	NA
SW8270C	SW8270C Dibenzofuran	0 33	40.88	mg/kg	NA	NA	NA
SW8270C	SW8270C Fluoranthene	0.33	408.8	mg/kg	NA	NA	NA
SW8270C Fluorene	Fluorene	0.33	408.8	mg/kg	NA	NA	NA
SW8270C	SW8270C Indeno[1,2,3-c,d]pyrene	0 33	0.33	mg/kg	NA	NA	NA
SW8270C	SW8270C Naphthalene	0 33	204 4	mg/kg	NA	. NA	NA
SW8270C	SW8270C Phenanthrene	0.33	306.6	mg/kg	NA	NA	NA
SW8270C Pyrene	Pyrene	0.33	306.6	mg/kg	NA	NA	NA

Risk Reduction Standard 1 Risk Reduction Standard 2 Notes: RRS 1 RRS 2

Values above RRS 1 are bold and enclosed in ( ) Values above RRS 2 are bold and enclosed in [( )]

estimated value below the reporting limit estimated value above the reporting limit analyte not detected not analyzed || || IJ · A H J

AOC 19 NAS Fort Worth JRB, Texas Table 4.4 (continued) Subsurface Soil Detections

	34	,	7	s	BHGLAOC1907 10 ft	BHGLAOC1908 05 ft	BHGLAOC1908 10 ft
Method	Analyte	RRS 1	RRS 2	Unit	2001-08-20 Dup	2001-08-21	2001-08-21
SW6010B	Arsenic	6.58	6.58	mg/kg	NA	27F	3.7 F
SW6010B	Barium	128 1	200	mg/kg	NA	92	53.5
SW6010B	Beryllum	1.13	1.13	mg/kg	NA	0.86	0 64
SW6010B	Cadmium	0.59	0 59	mg/kg	NA		
SW6010B	Chromium, total	16.31	16.31	mg/kg	NA	[(17.7)]	13
SW6010B	Cobalt	6.19	613 2	mg/kg	NA	3.3 F	2.9 F
SW6010B	Copper	13.72	130	mg/kg	NA	8.9 F	4.4 F
SW6010B	Nickel	19 76	204 4	mg/kg	NA	9.4 F	7.6 F
SW6010B	Tin	10	6132	mg/kg	NA		
SW6010B	Vanadium	37.4	71.54	mg/kg	NA	25 F	25 F
SW6010B	Zinc	313	3066	mg/kg	NA		1
SW7041	Antimony	0.712	0.712	mg/kg	NA	0.23 F	-
SW7421	Lead	12.66	12.66	mg/kg	NA	10.1	6.4
SW7471A	Mercury	0 035	0 1513	mg/kg	NA		W1 447
SW8260B	cis-1,2-Dichloroethene	0 005	7	mg/kg	NA		(0.007)
SW8260B	Trichloroethene (TCE)	0 005	0.5	mg/kg			(0.03)
SW8270C	Acenaphthene	0.33	613.2	mg/kg	NA		
SW8270C	Anthracene	0.33	3066	mg/kg	NA	7	-
SW8270C	Benzo[a]anthracene	0.33	0.33	mg/kg	NA		
SW8270C	Benzo[a]pyrene	0.33	0 33	mg/kg	NA	•	-
SW8270C	Benzo[b]fluoranthene	0.33	0 33	mg/kg	NA	4	1.0
SW8270C	Benzo[g,h,i]perylene	0.33	306.6	mg/kg	NA	1	1
SW8270C	Benzo[k]fluoranthene	0.33	0 392	mg/kg	NA		
SW8270C	Benzy1 alcohol	0.33	3066	mg/kg	NA		1
SW8270C	bis(2-Ethylhexyl)phthalate	0.33	90	mg/kg	NA		

NAS Fort Worth JRB, Texas Subsurface Soil Detections Table 4.4 (continued)

! ! !		, i	, , , , , , , , , , , , , , , , , , ,	*	Ħ	BHG	BHG
Method	Analyte	RRS 1	1   RRS 2   Unit	Unit	2001-08-20 Dup	2001-08-21	2001-08-21
SW8270C Chrysene	Chrysene	0.33	3.92	mg/kg	NA	1	-
SW8270C	SW8270C Dibenz[a,h]anthracene	0.33	0.33	mg/kg	NA	1	1
SW8270C	SW8270C Dibenzofuran	0.33	40 88	mg/kg	NA	1	1
SW8270C	SW8270C Fluoranthene	0.33	408.8	mg/kg	NA	1	1
SW8270C Fluorene	Fluorene	0 33	408 8	mg/kg	NA		-
SW8270C	SW8270C Indeno[1,2,3-c, d]pyrene	0 33	0.33	mg/kg	NA	-	:
SW8270C	SW8270C Naphthalene	0 33	204 4	mg/kg	NA	1	ŀ
SW8270C	SW8270C Phenanthrene	0.33	306.6	306.6 mg/kg	NA	1	1
SW8270C Pyrene	Pyrene	0.33	306.6 mg/kg	mg/kg	NA	4	4.8

Notes:

RRS 1 = Risk Reduction Standard 1

RRS 2 = Risk Reduction Standard 2

Values above RRS 1 are bold and enclosed in ( )

Values above RRS 2 are bold and enclosed in [()]

estimated value below the reporting limit estimated value above the reporting limit analyte not detected not analyzed I A H I

Table 4.4 (continued)
Subsurface Soil Detections
AOC 19
NAS Fort Worth JRB, Texas

Method	Analyte	RRS 1	RRS 2	Unit	BHGLAOC1909 05 ft 2001-08-22	BHGLAOC1910 05 ft 2001-08-22	BHGLAOC1910 10 ft 2001-08-22
SW6010B Arsenic	1 1	6.58	6.58	mg/kg	NA	NA	NA
SW6010B Barium	Barium	128.1	200	mg/kg	NA	NA	NA
SW6010B Beryllum	Beryllıum	1.13	1.13	mg/kg	NA	NA	NA
SW6010B Cadmium	Cadmium	0.59	0.59	mg/kg	NA	NA	NA
SW6010B	SW6010B Chromium, total	16.31	16 31	mg/kg	NA	NA	NA
SW6010B Cobalt	Cobalt	6.19	613.2	mg/kg	NA	NA	NA
SW6010B Copper	Copper	13.72	130	mg/kg	NA	NA	NA
SW6010B Nickel	Nickel	19.76	204.4	mg/kg	NA	NA	NA
SW6010B Tin	Tin	10	6132	mg/kg	NA	AN	NA
SW6010B Vanadium	Vanadium	37.4	71.54	mg/kg	NA	NA	NA
SW6010B Zinc	Zinc	31.3	3066	mg/kg	NA	NA	NA
SW7041	Antimony	0.712	0 712	mg/kg	NA	NA	NA
SW7421	Lead	12 66	12.66	mg/kg	NA	VN	NA
SW7471A Mercury	Mercury	0.035	0 1513	mg/kg	NA	NA	NA
SW8260B	SW8260B cis-1,2-Dichloroethene	0.005	<i>L</i>	mg/kg	NA	NA	NA
SW8260B	SW8260B Trichloroethene (TCE)	0.005	0.5	mg/kg	NA	NA	NA
SW8270C	SW8270C Acenaphthene	0.33	613.2	mg/kg			1
SW8270C	SW8270C Anthracene	0.33	3066	mg/kg		**	•
SW8270C	SW8270C Benzo[a]anthracene	0.33	0.33	mg/kg		;	•
SW8270C	SW8270C Benzo[a]pyrene	0.33	0.33	mg/kg	-	0.077 F	-
SW8270C	SW8270C Benzo[b]fluoranthene	0.33	0.33	mg/kg			-
SW8270C	SW8270C Benzo[g,h,i]perylene	0.33	306 6	mg/kg	1	***	•
SW8270C	SW8270C Benzo[k]fluoranthene	0.33	0 392	mg/kg			-
SW8270C	SW8270C Benzyl alcohol	0 33	3066	mg/kg	,		-
SW8270C	SW8270C bis(2-Ethylhexyl)phthalate	0 33	90	mg/kg			1

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NAS Fort Worth JRB, Texas Subsurface Soil Detections Table 4.4 (continued) AOC 19

	4					Annual Annua	
Method	Analyte	RRS 1	RRS 1 RRS 2 Unit	Unit	BHGLAOC1909 05 ft 2001-08-22	BHGLAOC1910 05 ft 2001-08-22	BHGLAOC1910 10 ft 2001-08-22
SW8270C Chrysene	Chrysene	0.33	3 92	mg/kg	•		
SW8270C	SW8270C Dibenz[a,h]anthracene	0.33	0.33	mg/kg			
SW8270C	SW8270C Dibenzofuran	0.33	40.88	mg/kg	1	1	
SW8270C	SW8270C Fluoranthene	0.33	408.8	mg/kg	-	1	1
SW8270C Fluorene	Fluorene	0 33	408.8	mg/kg	1	-	ļ
SW8270C	SW8270C Indeno[1,2,3-c,d]pyrene	0 33	0.33	0.33 mg/kg		•	
SW8270C	SW8270C Naphthalene	0 33	204.4	204.4 mg/kg		1	
SW8270C	SW8270C Phenanthrene	0.33	306 6 mg/kg	mg/kg	*	:	
SW8270C Pyrene	Pyrene	0.33	306.6	306.6 mg/kg	••		1

Risk Reduction Standard 1 Risk Reduction Standard 2 Notes: RRS 1 RRS 2

Values above RRS 1 are bold and enclosed in ( ) Values above RRS 2 are bold and enclosed in [( )]

estimated value below the reporting limit estimated value above the reporting limit analyte not detected not analyzed il . K H

AOC 19 NAS Fort Worth JRB, Texas Table 4.4 (continued) Subsurface Soil Detections

Method	Analyte	RRS 1	RRS 2	Unit	BHGLAOC1911 10 ft 2001-12-05	BHGLAOC1911 10 ft 2001-12-05 Dup	BHGLAOC1912 05 ft 2001-12-05
SW6010B Arsenic	Arsenic	6.58	6 58	mg/kg	NA	NA	NA
SW6010B Baruum	Barıum	128.1	200	mg/kg	NA	NA	NA
SW6010B Beryllium	Beryllium	1.13	1 13	mg/kg	NA	NA	NA
SW6010B Cadmium	Cadmium	0.59	0 59	mg/kg	NA	NA	NA
SW6010B	SW6010B Chromium, total	16.31	16.31	mg/kg	NA	NA	NA
SW6010B Cobalt	Cobalt	6.19	613.2	mg/kg	NA	ΥN	NA
SW6010B Copper	Copper	13 72	130	mg/kg	NA	NA	NA
SW6010B Nickel	Nickel	19 76	204.4	mg/kg	NA	ΨN	NA
SW6010B Tm	Tm	10	6132	mg/kg	NA	NA	NA
SW6010B Vanadium	Vanadium	37.4	71.54	mg/kg	NA	NA	NA
SW6010B Zinc	Zinc	31.3	3066	mg/kg	NA	ΥN	NA
SW7041	Antimony	0.712	0.712	mg/kg	NA	NA	NA
SW7421	Lead	12.66	12 66	mg/kg	NA	NA	NA
SW7471A Mercury	Mercury	0.035	0 1513	mg/kg	NA	NA	NA
SW8260B	SW8260B cis-1,2-Dichloroethene	0.005	7	mg/kg	NA	NA	NA
SW8260B	SW8260B Trichloroethene (TCE)	0 005	0.5	mg/kg	NA		NA
SW8270C	SW8270C Acenaphthene	0.33	613.2	mg/kg	0 13 F		:
SW8270C	SW8270C Anthracene	0 33	3066	ga/gm	0 23 F	[(0.64)]	
SW8270C	SW8270C Benzo[a]anthracene	0 33	0 33	mg/kg	[(0.65)]	[(0.82 J)]	-
SW8270C	SW8270C Benzo[a]pyrene	0.33	0.33	mg/kg	[(0.58 J)]	[(0.91)]	
SW8270C	SW8270C Benzo[b]fluoranthene	0.33	0.33	mg/kg	[(0.67)]	(0.52 J)	a 1.
SW8270C	SW8270C Benzo[g, h, t]perylene	0 33	306.6	mg/kg	0.3 F	[(0.62)]	ar ver
SW8270C	SW8270C Benzo[k]fluoranthene	0.33	0 392	mg/kg	[(0.47)]		
SW8270C	SW8270C Benzyl alcohol	0 33	3066	mg/kg	-	0 16 F	***
SW8270C	SW8270C bis(2-Ethylhexyl)phthalate	0 33	9.0	mg/kg	-	(0.72)	1

NAS Fort Worth JRB, Texas Subsurface Soil Detections Table 4.4 (continued) AOC 19

Method         Analyte         RRS 1         RRS 2         Unit           SW8270C         Chrysene         0.33         3.92         mg/kg           SW8270C         Dibenzofuran         0.33         40.88         mg/kg           SW8270C         Fluoranthene         0.33         408.8         mg/kg           SW8270C         Fluorene         0.33         408.8         mg/kg           SW8270C         Indeno[1,2,3-c,d]pyrene         0.33         0.33         mg/kg           SW8270C         Naphthalene         0.33         204.4         mg/kg		BHGLAOC1911 10 ft	BHGLAOC1911 10 ft	BHGLAOC1912 05 ft
h]anthracene 0.33 3.92 rran 0.33 40.88 ene 0.33 408.8 2,3-c,d]pyrene 0.33 0.33 ne 0.33 204 4	7	2001-12-05	2001-12-05 Dup	2001-12-05
intracene     0.33     0.33       0.33     40.88       0.33     408.8       0.33     408.8       c,d]pyrene     0.33     0.33       0.33     204.4	3.92	(0.74)	0 17 F	
0.33 40.88 0.33 408.8 0.33 408.8 c.d]pyrene 0.33 0.33	0.33	-	(1.1)	
c,d]pyrene 0.33 408.8 0.33 c.4d	40.88	1 1	0.17 F	4 9
0.33 408.8 0.33 0.33 0.33 204.4	408.8	(2.1 J)	[(0.5 J)]	
0.33 0.33 0.33	408.8	0.27 F		
0.33 204 4	0 33	0.31 F	(0.55 J)	1 9
		0.082 F	(1.2)	
SW8270C Phenanthrene 0.33 306.6 mg/kg	306.6	(1.6 J)		
SW8270C Pyrene 0.33 306.6 mg/kg	306.6	(1.3)		

Risk Reduction Standard 1 Notes: RRS 1 RRS 2

RRS 2 = Risk Reduction Standard 2
Values above RRS 1 are bold and enclosed in ()
Values above RRS 2 are bold and enclosed in [()]

estimated value below reporting limit not analyzed I X E I

analyte not detected

Table 4.4 (continued)
Subsurface Soil Detections
AOC 19
NAS Fort Worth JRB, Texas

		^				***************************************	( p
		•			BHGLAOC1912 10 ft	BHGLAOC1913 05 ft	BHGLAOC1913 10 ft
Method	Analyte	RRS 1	RRS 2	Unit	2001-12-05	2001-12-05	2001-12-05
SW6010B Arsenic	Arsenic	6 58	6.58	mg/kg	NA	NA	NA
SW6010B Barium	Barium	128.1	200	mg/kg	NA	NA	NA
SW6010B	SW6010B Beryllium	1.13	1 13	mg/kg	NA	NA	NA
SW6010B	SW6010B Cadmium	0.59	0.59	mg/kg	NA	NA	NA
SW6010B	SW6010B Chromium, total	16.31	16.31	mg/kg	NA	NA	NA
SW6010B Cobalt	Cobalt	6.19	613.2	mg/kg	NA	NA	NA
SW6010B Copper	Copper	13.72	130	mg/kg	NA	NA	NA
SW6010B Nickel	Nickel	19.76	204.4	mg/kg	NA	NA	NA
SW6010B Tin	Tin	10	6132	mg/kg	NA	NA	NA
SW6010B	SW6010B Vanadium	37 4	71.54	mg/kg	NA	NA	NA
SW6010B Zinc	Zinc	313	3066	mg/kg	NA	NA	NA
SW7041	Antimony	0.712	0.712	mg/kg	NA	NA	NA
SW7421	Lead	12.66	12 66	mg/kg	NA	NA	NA
SW7471A Mercury	Mercury	0.035	0 1513	mg/kg	NA	NA	NA
SW8260B	SW8260B cis-1,2-Dichloroethene	0.005	7	mg/kg	NA	NA	NA
SW8260B	SW8260B Trichloroethene (TCE)	0 005	0.5	mg/kg	NA	(r 150.0)	(0.036)
SW8270C	SW8270C Acenaphthene	0 33	613.2	mg/kg		NA	NA
SW8270C	SW8270C Anthracene	0 33	3066	mg/kg		NA	NA
SW8270C	SW8270C Benzo[a]anthracene	0.33	0 33	mg/kg		NA	NA
SW8270C	SW8270C Benzo[a]pyrene	0 33	0.33	mg/kg	•	NA	NA
SW8270C	SW8270C Benzo[b]fluoranthene	0 33	0 33	mg/kg	1	NA	NA
SW8270C	SW8270C Benzo[g, h, i]perylene	0.33	306 6	mg/kg	•	NA	NA
SW8270C	SW8270C Benzo[k]fluoranthene	0.33	0 392	mg/kg	,	NA	NA
SW8270C	SW8270C Benzyl alcohol	0.33	3066	mg/kg		NA	NA
SW8270C	SW8270C bis(2-Ethylhexyl)phthalate	0 33	90	mg/kg	-	NA	NA

NAS Fort Worth JRB, Texas Subsurface Soil Detections Table 4.4 (continued) AOC 19

*5	h	*			BHGLAOC1912 10 ft	BHGLAOC1913 05 ft	BHGLAOC1913 10 ft
Method	Analyte	RRS 1	RRS 2	Unit	2001-12-05	2001-12-05	2001-12-05
SW8270C Chrysene	Chrysene	0 33	3.92	mg/kg	•	NA	NA
SW8270C	W8270C Dibenz[a, h]anthracene	0.33	0.33	mg/kg	:	NA	NA
SW8270C	SW8270C Dibenzofuran	0.33	40 88	mg/kg		NA	NA
SW8270C	SW8270C Fluoranthene	0 33	408 8	mg/kg	-	NA	NA
SW8270C Fluorene	Fluorene	0.33	408 8	mg/kg	:	NA	NA
SW8270C	SW8270C Indeno[1,2,3-c,d]pyrene	0.33	0.33	mg/kg		NA	NA
SW8270C	SW8270C Naphthalene	0.33	204.4	mg/kg	••	NA	NA
SW8270C	SW8270C Phenanthrene	0.33	306.6	mg/kg	•	NA	NA
SW8270C Pyrene	Pyrene	0.33	306 6	mg/kg	<b>.</b>	NA	NA

Risk Reduction Standard 1 Risk Reduction Standard 2 Notes: RRS 1 RRS 2

Values above RRS 1 are bold and enclosed in () Values above RRS 2 are bold and enclosed in [()]

analyte not detected not analyzed Y H H

estimated value below reporting limit

Table 4.4 (continued)
Subsurface Soil Detections
AOC 19
NAS Fort Worth JRB, Texas

Wethod	Ansieta	PRS 1	c saa	Tinit	THGLA0C1905 05 ft WHGLTA050 05 ft WHGLTA051 05 ft WHGLTA052 05 ft	WHGLTA050 05 ft	WHGLTA051 05 ft	WHGLTA052 05 ft
SW6010B Arsenic		6.58	6.58	mg/kg	35F	NA	NA	NA
SW6010B Barium	Barium	128.1	200	mg/kg	61.2	NA	NA	NA
SW6010B	SW6010B Beryllum	1.13	1.13	mg/kg	0 28	NA	NA	NA
SW6010B Cadmium	Cadmium	0.59	0.59	mg/kg	0.28 F	NA	NA	NA
SW6010B	SW6010B Chromium, total	16.31	16.31	mg/kg	7.2 F	NA	NA	NA
SW6010B Cobalt	Cobalt	6.19	613.2	mg/kg	2.4 F	NA	NA	NA
SW6010B Copper	Copper	13.72	130	mg/kg	3.3 F	NA	NA	NA
SW6010B Nickel	Nickel	19 76	204.4	mg/kg	4.3 F	NA	NA	NA
SW6010B Tin	Tin	10	6132	mg/kg	1.1 F	NA	NA	NA
SW6010B Vanadium	Vanadium	37 4	71.54	mg/kg	15 F	NA	NA	NA
SW6010B Zinc	Zinc	31.3	3066	mg/kg	17 F	NA	NA	NA
SW7041	Antimony	0.712	0.712	mg/kg		NA	NA	NA
SW7421	Lead	12.66	12.66	mg/kg	7.9	NA	NA	NA
SW7471A Mercury	Mercury	0.035	0.1513	mg/kg	0 0092 F	NA	NA	NA
SW8260B	SW8260B cis-1,2-Dichloroethene	0 005	7	mg/kg	1 .	NA	NA	NA
SW8260B	SW8260B Trichloroethene (TCE)	0.005	0.5	mg/kg		0.002 F	0 001 F	-
SW8270C	SW8270C Acenaphthene	0.33	613.2	mg/kg	0 17 F	NA	NA	NA
SW8270C	SW8270C Anthracene	0 33	3066	mg/kg	(0.38)	NA	NA	NA
SW8270C	SW8270C Benzo[a]anthracene	0 33	0.33	mg/kg	[(2)]	NA	NA	NA
SW8270C	SW8270C Benzo[a]pyrene	0.33	0.33	mg/kg	[(1.8)]	NA	NA	NA
SW8270C	SW8270C Benzo[b]fluoranthene	0.33	0 33	mg/kg	[(2.2)]	NA	NA	NA
SW8270C	SW8270C Benzo[g,h,i]perylene	0 33	306 6	mg/kg	(1.3)	NA	NA	NA
SW8270C	SW8270C Benzo[k]fluoranthene	0.33	0.392	mg/kg	[(1.4)]	NA	NA	NA
SW8270C	SW8270C Benzyl alcohol	0 33	3066	mg/kg	***	NA	NA	NA
SW8270C	SW8270C bis(2-Ethylhexyl)phthalate	0 33	0 6	mg/kg	[(0.66)]	NA	NA	NA

NAS Fort Worth JRB, Texas Subsurface Soil Detections Table 4.4 (continued) AOC 19

·	×	*	*		THGLA0C1905 05 ft WHGLTA050 05 ft WHGLTA051 05 ft WHGLTA052 05 ft	WHGLTA050 05 ft	WHGLTA051 05 ft	WHGLTA052 05 f
Method	Analyte	RRS 1	RRS 1 RRS 2	Unit	2001-08-15	2001-02-07	2001-02-07	2001-02-07
SW8270C Chrysene	Chrysene	0.33	3.92	mg/kg	(2)	NA	NA	NA
SW8270C	W8270C Dibenz[a, h]anthracene	0.33	0.33	mg/kg	[(0.43)]	NA	NA	NA
SW8270C	SW8270C Dibenzofuran	0.33	40.88	mg/kg	0.077 F	NA	NA	NA
SW8270C	SW8270C Fluoranthene	0.33	408 8	mg/kg	(3.5)	NA	NA	NA
SW8270C Fluorene	Fluorene	0 33	408.8	mg/kg	0.14 F	NA	NA	NA
SW8270C	W8270C Indeno[1,2,3-c,d]pyrene	0.33	0.33	mg/kg	[(1.1)]	NA	NA	NA
SW8270C	SW8270C Naphthalene	0.33	204.4	mg/kg	***	NA	NA	NA
SW8270C	SW8270C Phenanthrene	0.33	306.6	mg/kg	(2.1)	NA	NA	NA
SW8270C Pyrene	Pyrene	0.33	306.6	mg/kg	(3.6)	NA	NA	NA

H Notes: RRS 1

Values above RRS 1 are bold and enclosed in ( ) Values above RRS 2 are bold and enclosed in [()] Risk Reduction Standard 1 Risk Reduction Standard 2 RRS 2

estimated value below reporting limit not analyzed I AN F I

analyte not detected

# Table 4.5 Groundwater Sampling Results AOC 19 NAS Fort Worth JRB, Texas

				TCE	TCE	TCE
Monitoring Well	RRS 1	RRS 2	Unit	FEB. 2001	APR. 2001	JUNE 2001
WHGLTA004	0.0005	0.005	mg/L	[(0.530]	[(0.45)]	[(0.66)]
WHGLTA050 ·	0.0005	0.005	mg/L	[(0.15 J)]	[(0.17)]	[(0.26)]
WHGLTA051	0.0005	0.005	mg/L	[(0.19)]	[(0.17)]	[(0.31)]
WHGLTA052	0.0005	0.005	mg/L	[(0.3)]	[(0.3)]	[(0.57)]
WHGLTA801	0.0005	0.005	mg/L	[(0.36)]	[(0.15)]	[(0.32)]
WHGLTA801 Duplicate	0.0005	0.005	mg/L	[(0.26)]	[(0.17)]	[(0.34)]

## Notes:

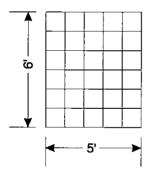
TCE - trichloroethene

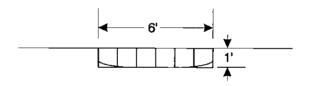
RRS 1 = Risk Reduction Standard 1 RRS 2 = Risk Reduction Standard 2

Values above RRS 2 are bold and enclosed in [( )] J = estimated value above the reporting limit

**FIGURES** 







CROSS-SECTION (from the west)

**PLAN VIEW** 

Filename X \AFC001\26\aoc19 site\_investigation\
Report\aoc\_19 as-builts cdr

Project AFC001-026-20

Created by cfarmer 10/01/01

Revised 02/22/02 asp

Source

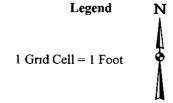
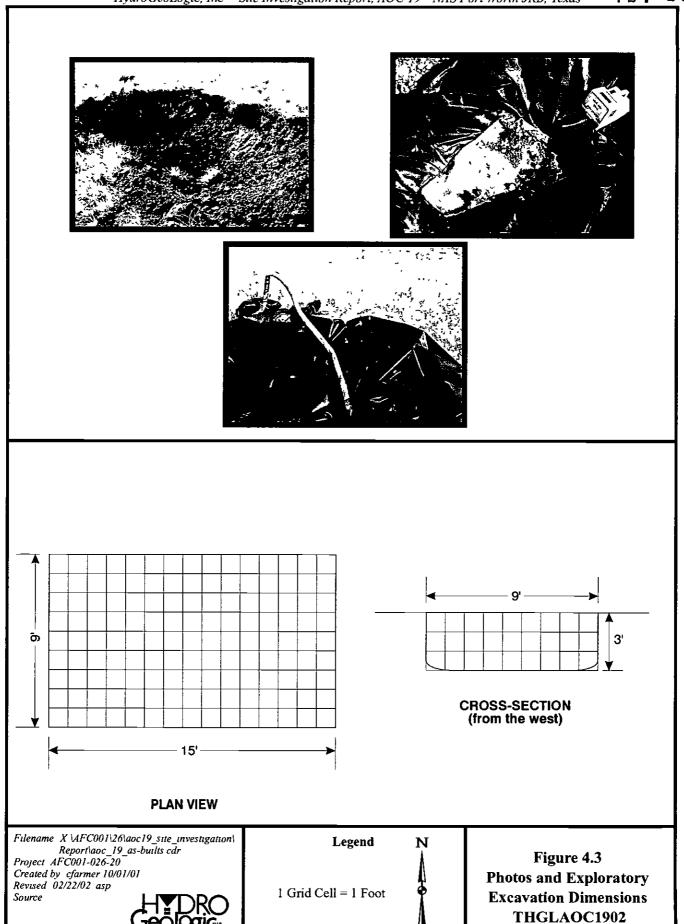
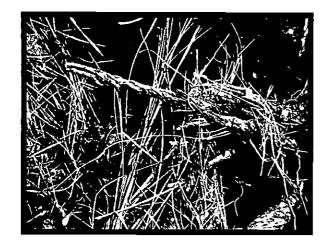
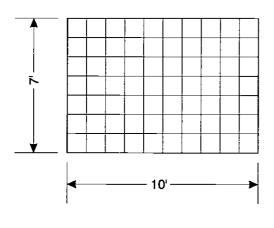


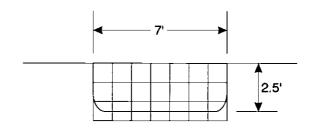
Figure 4.2 **Photo and Exploratory Excavation Dimensions** THGLAOC1901











CROSS-SECTION (from the west)

Filename X \AFC001\26\aoc19\_site\_investigation\
Report\aoc\_19\_as-builts cdr
Project AFC001-026-20
Created by cfarmer 10/01/01
Revised 02/22/02 asp
Source

HYDRO Geologic

**PLAN VIEW** 

Legend N

Figure 4.4
Photos and Exploratory
Excavation Dimensions
THGLAOC1903



Report\aoc\_19\_as-builts cdr

Project AFC001-026-20 Created by cfarmer 10/01/01 Revised 02/22/02 asp

Source

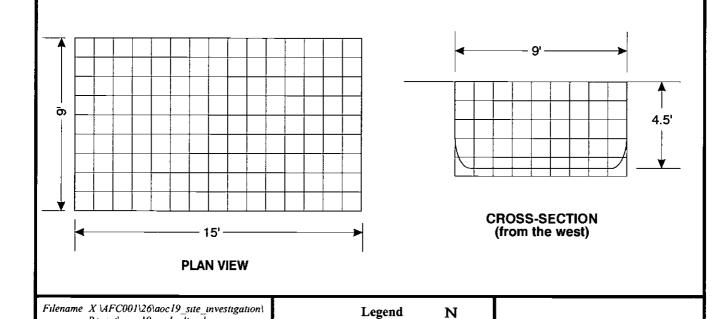


Figure 4.5

**Photos and Exploratory** 

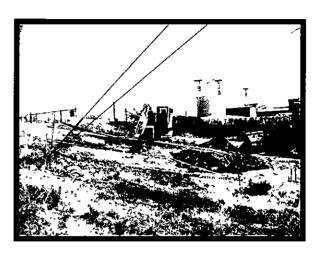
**Excavation Dimensions** 

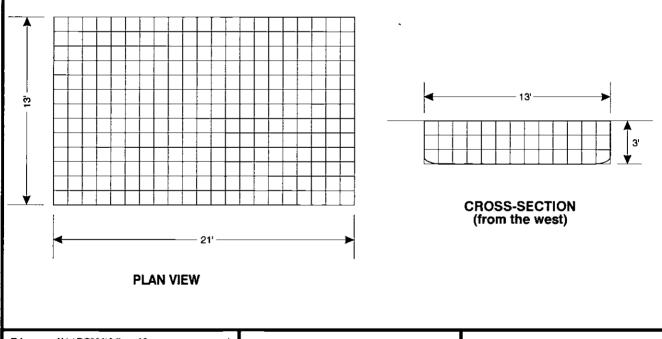
THGLAOC1904



1 Gnd Cell = 1 Foot







Filename X \AFC001\26\aoc19\_stte\_investigation\
Report\aoc\_19\_as-builts cdr

Project AFC001-026-20

Created by cfarmer 10/01/01

Revised 02/22/02 asp

Source



Legend
1 Grid Cell = 1 Foot

Figure 4.6
Photos and Exploratory
Excavation Dimensions
THGLAOC1905

Suspected Former Fire Training Area B Groundwater Elevation Contour (April 2001) Analyte detected above RRS-2 Analyte detected above RRS-2, but below site-specific MSC Analyte detection above RRS-1 or RRS-2, but not confirmed HydroGeoLogic, Inc.—Site Investigation Report, AOC 19 NAS Fort Worth JRB. Texas Solid Waste Management Unit (SWMU) 174-83-2 AOC 19 Exploratory Excavation (2001) Analyte Concentrations in Soil NAS Fort Worth JRB (Carswell Field) 727 Filename: X \AFC001\26\aoc19\_site\_investigation\Report\ Generalized Groundwater Flow Analyte not detected or detected below RRS-1 Debris Area (No Rig Access) **Environmental Excellence** Air Force Center for SWMU 25 Test Pit (1997) Above RRS1 Yellow Headers indicate data screening values Figure 4.8 Area of Concern (AOC) AOC 19 9 MSC - Media Specific Concentration GWP-Ind SCALE IN FEET Legend Phase II Soul Bornng Phase I Soil Boring Monitoring Well Map Source: HGĽ GIS Database RRS-2 - Risk Reduction Standard 2 RRS-1 - Risk Reduction Standard 1 Project AFC001-026-20 Created : 09/20/00 ASP Revised 02/27/02 jb All results in mg/kg. U.S. 05/15/00 02/01/01 05 R 05 ft **(**) 0.036 02/07/01 , C<sub>G</sub>G 02/07/01 05 ft 00 ft 02/07/01 02/12/00 0.051.1 08/20/01 02/01/01 Analyte 08/20/01 Analyte WHGLTA052 08/21/01 Analyte Trichloroethene (TCE) BHGLA0C190 WHGLTA05 10 ft Dup 08/20/01 Method SW8260B BHGLA0C1913 BHGLAOC1903 (No Exceedences) 05 ft BHGLA0C1902 Method 08/20/01 10 ft BHGLA0C1906 00 ft 08/21/01 Method SW8260B 05/26/00 05/12/00 BHGLAOC1912 (No Exceedences) 05 ft 05/26/00 []--THGLAOC1902 BHGLA0C1908 (BHGLAQC1909 (No Exceedences) THGLAOC1901 THGLAOC1904 THGLTA028 THGLAOC1905 05/12/00 Farme BHGLAOC1910 (No Exceedences) 05/26/00 8 Arsenic Frichloroethene (TCE) BHGLA0C1901 / BHGLAOC1907 Specific N face 10 ft 08/20/01 05 ft 08/20/01 0 006 0 720 00 ft 08/20/01 10 ft 12/06/01 300 08/15/01 SW8270C Anthracene
SW8270C Benzo(a)nuthracene
SW8270C Benzo(a)pyrene
SW8270C Benzo(b)fluoranthene
SW8270C Benzo(b,h)perylene
SW8270C Benzo(k)fluoranthene
SW8270C Benzo(k)fluoranthene
SW8270C Chrysene
SW8270C Chrysene
SW8270C Chrysene
SW8270C Fluoranthene
SW8270C Fluoranthene
SW8270C Fluoranthene
SW8270C Fluoranthene
SW8270C Phenanthrene
SW8270C Phenanthrene SW6010 Arsente
SW6090 Chromum, Total
SW8260B crs-1,2-Dichloroethylene
SW8260B Trichloroethylene (TCE)
SW8260B Anthracene
SW8270C Benzo(a)anthracene
SW8270C Benzo(a)pyrene
SW8270C Benzo(b)fluoranthene
SW8270C Benzo(b)fluoranthene
SW8270C Benzo(s,h,i)perylene
SW8270C Chrysene
SW8270C Chrysene
SW8270C Chrysene
SW8270C Chrysene
SW8270C Fluoranthene
SW8270C Phenathrene
SW8270C Phenathrene
SW8270C Phenathrene Method Analyte
SW8260B Truchloroethene (TCE)
SW8270C bis(2-Ethylhexyl)phthal BHGLA0C1911 Data Screening Values

Method BHGLA0C1905 THGLAOC1905

## TAB

SECTION 5.0

#### 5.0 DISCUSSION OF ANALYTICAL RESULTS

#### 5.1 GEOPHYSICAL SURVEY

The geophysical survey and subsequent exploratory excavations conducted at AOC 19 revealed the source of the metallic anomalies to be consistent with material found in a landfill, and not a fire training area. The analytical results of the surface and subsurface soil sampling within and around the anomalies likewise were not indicative of a former fire training area. As a result, the subsurface materials found at AOC 19 are most likely to be an extension of the former landfill SWMU 25/Landfill 8.

#### 5.2 SURFACE SOIL

No concentrations of any inorganic constituents were detected above RRS 1 in any of the surface soil samples collected as part of the SI at AOC 19. The only analyte detected above RRS 1 in the surface soil at AOC 19 was TCE. Figure 4.8 depicts the relevant surface soil results for AOC 19.

• TCE was detected at 0.019 mg/kg in the surface soil sample collected from boring BHGLAOC1902. The concentration is an isolated detection in the surface soil, slightly exceeding the RRS 1 (0.005 mg/kg), and well below the MSC (0.5 mg/kg) for this analyte. This low concentration of TCE is delineated in the surface soil by WHGLTA050 (east), BHGLAOC1903 (south), BHGLAOC1908 (west), BHGLAOC1901 (north), and vertically by a lower concentration at the 5-foot interval. Based on this information, TCE does not warrant further investigation in the surface soils at AOC 19.

#### 5.3 SUBSURFACE SOIL

Concentrations of both inorganic and organic analytes were found in the subsurface soil at AOC 19. Figure 4.8 depicts the relevant subsurface soil results for AOC 19. These constituents are discussed in the following subsections.

#### 5.3.1 Inorganic Constituents

The following inorganic constituents were detected at concentrations slightly above their corresponding background values in samples collected in the subsurface at AOC 19: arsenic and chromium.

• Arsenic was detected at 6.7 mg/kg in the soil sample collected from the 10-foot interval of BHGLAOC1901. This result was isolated and only slightly exceeds both the background and MSC value of 6.58 mg/kg. No pattern of occurrence can be established for this compound. Therefore, this detection of arsenic most likely

represents a natural variation of background concentrations. Based on this information, this constituent does not warrant further investigation at AOC 19.

• Chromium was detected at 17.7 mg/kg in the soil sample collected from BHGLAOC1908 in the 5-foot interval. The concentration was only slightly above the background value of 16.31 mg/kg. No pattern of occurrence can be established for this compound. Therefore, this inorganic constituent is likely to represent a natural variation of background concentrations and is not indicative of a release of hazardous constituents from AOC 19. Based on this information, this constituent does not warrant further consideration at AOC 19.

#### 5.3.2 Organic Constituents

Several organic constituents were detected in the subsurface soil at AOC 19. A total of two VOCs were detected at concentrations above their corresponding RRS 1 values: cis-1,2-dichloroethene and TCE. The following SVOC constituents were detected at concentrations exceeding RR1 and or RRS 2 values in the subsurface at AOC 19: bis(2-ethylhexyl)phthalate and various PAHs [anthracene, benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[g,h,i]perylene, benzo[k]fluoranthene, chrysene, dibenz[a,h]anthracene, fluoranthene, indeno[1,2,3-c,d]pyrene, phenanthrene, and pyrene].

- cis-1,2-Dichloroethene was detected at 0.007 mg/kg in boring BHGLAOC1908 at the 10-foot interval. Cis-1,2-dichloroethene was detected only once, the result was slightly above RRS 1 (0.005 mg/kg) and well below the MSC (7 mg/kg), and the analyte is delineated. As a result, no pattern of occurrence can be established for this analyte. Based on this information, this constituent does not warrant further investigation at AOC 19.
- Trichloroethene was detected in the following soil samples: the 10-foot interval of boring BHGLAOC1901 (0.019 mg/kg); the 5-foot interval of boring BHGLAOC1902 (0.008 mg/kg); the 5-foot interval of boring BHGLAOC1904 (0.009); the 5-foot interval of boring BHGLAOC1905 (0.006 mg/kg); the 5- and 10-foot intervals of boring BHGLAOC1906 (0.033 mg/kg and 0.008 J mg/kg, respectively); the 10-foot interval of boring BHGLAOC1908 (0.030 mg/kg); and the 5- and 10-foot intervals of boring BHGLAOC1913 (0.051 J mg/kg and 0.036 mg/kg, respectively). TCE was detected at low concentrations above RRS 1 (0.005 mg/kg) and well below RRS 2 (7 mg/kg) throughout the site. The TCE concentrations in the subsurface soils at AOC 19 do not appear to be associated with a release from the site. The bedrock and water table at AOC 19 is shallow, therefore the low concentrations of TCE in the soil are most likely attributed to a smear zone created by seasonal fluctuations in the water table from the basewide TCE plume previously mentioned in Section 3.2. In addition, all TCE concentrations in the subsurface soils at AOC 19 have been delineated to decreasing concentrations and/or RRS 1. As a result, further investigation of TCE in the soil at AOC 19 is not warranted.

- bis(2-Ethylhexyl)phthalate was detected at 0.42 mg/kg in the soil sample collected from the 10-foot interval of boring BHGLAOC1905 and at 0.66 mg/kg in the soil sample collected from the bottom of THGLAOC1905. Both of these results are above the RRS 1 of 0.33 mg/kg. However, BHGLAOC1905 was below the MSC (0.6 mg/kg) and THGLAOC1905-02 exceeded the MSC. An SPLP extract of THGLAOC1905-02 was analyzed and a site-specific MSC of 0.66 mg/kg was developed. Bis(2-ethylhexyl)phthalate is delineated and based on the SPLP extraction result, shows no impact on groundwater. As a result, this constituent does not warrant further investigation at AOC 19.
- PAHs were detected in THGLAOC1905 and BHGLAOC1911. Twelve of the sixteen PAH compounds were detected above RRS 1 in the sample collected from the floor sample from THGLAOC1905, and ten were detected above RRS 1 in the 10-foot interval (or its duplicate) of boring BHGLAOC1911. Soil sample THGLAOC1905-02 was extracted for SPLP and the resulting water sample was a non-detect for all of the PAHs above RRS 2. These results established new site-specific MSCs and showed that the concentrations of these analytes in the soil are protective of groundwater. These analytes are fully delineated horizontally and vertically at AOC 19. Therefore further investigation of PAHs in the subsurface soil at AOC 19 is not warranted.

#### 5.4 GROUNDWATER

Three rounds of groundwater sampling were conducted at cross- and downgradient monitoring wells WHGLTA050, WHGLTA051, WHGLTA052, WHGLTA801, and upgradient monitoring well WHGLTA004. Groundwater samples from all five monitoring wells were analyzed for TCE, the only COPC identified in soil during Phase I. TCE was detected above RRS 2 in all five wells during the three rounds of sampling. The upgradient well, WHGLTA004, consistently had the highest detections of TCE, with concentrations decreasing down- and crossgradient from AOC 19. As a result, concentrations of TCE in the groundwater beneath AOC 19 appear to be attributed to the basewide TCE plume (Section 3.2) and do not appear to be a result of a release from AOC 19. Therefore, it is recommended that the groundwater at AOC 19 be addressed with the basewide TCE plume under a separate and ongoing environmental restoration project.

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# B

SECTION 6.0

#### 6.0 CONCLUSIONS

This SI of AOC 19 has been conducted in accordance with Chapter 335, Subchapter S of the TNRCC Risk Reduction Rules and NAS Fort Worth JRB Hazardous Waste Permit, HW-50289. Evidence resulting from past fire training activities typically includes elevated PID readings and odors due to high concentrations of flammable compounds such as waste oils and solvents that might have been used to ignite a training fire. In addition, stained soil is often present in conjunction with odors and organic vapor readings. The physical characteristics observed during the SI at AOC 19 were not indicative of typical fire training activities. No elevated PID readings, staining, or odors were observed in site soils and analytical results did not indicate the presence of organic constituents typically found at fire training areas. Therefore, it is unlikely that significant fire training exercises were conducted historically at AOC 19.

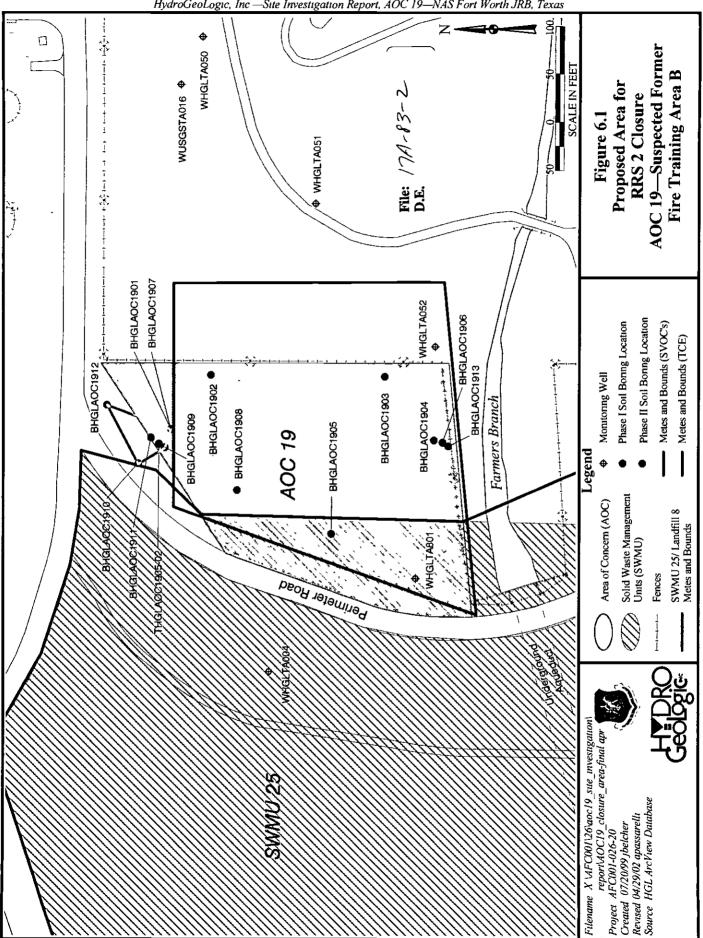
Although physical observations and analytical data support the conclusion that AOC 19 was not utilized extensively as a fire training area, the analytical results indicate that former activities at AOC 19 may have had an impact on a small area of subsurface soil. SVOC contaminated soil was identified in the north central section of the site relating to the buried debris unearthed during the exploratory excavations. The SVOCs in this section of the site have been delineated. Due to this small area of SVOC contamination in soil, closure under RRS 2 is recommended for AOC 19.

TCE was detected in soil and groundwater samples collected as part of the AOC 19 SI. However, these concentrations are likely attributable to the basewide TCE plume rather than to historical site activities. This conclusion is supported by the migration of the TCE plume beneath AOC 19 and that concentrations of TCE are consistently higher upgradient of AOC 19. As TCE concentrations in groundwater do not increase downgradient of AOC 19, it can be concluded that AOC 19 is not a source of TCE contamination in groundwater. Groundwater contamination in the vicinity of AOC 19 will continue to be addressed by the ongoing investigation of the basewide TCE plume. Nonetheless, as RRS 2 concentrations of TCE exist in site soils, the deed certification language will identify TCE as a contaminant left in place as part of this investigation.

Pursuant with Chapter 335, Subchapter S, and Sections 335.555 through 335.560 of the TNRCC RRS, this SI demonstrates that attainment of RRS 2 (Closure/Remediation to health-based standards and criteria) has been achieved and closure of AOC 19 is recommended. The proposed deed certification language, including the metes and bounds survey, is presented in Appendix H.

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**FIGURE** 



## TAB

SECTION 7.0

#### 7.0 REFERENCES

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## TAB

APPENDIX A

### APPENDIX A AREAS OF CONCERN 17, 18, AND 19 IDENTIFICATION LETTER



February 17, 1998

AFCEE/ERD
Attn. Mr. Joseph Dunkle
3207 North Road
Brooks Air Force Base, Texas 78235-5363

Re: Contract No. F41624-95-D-8005-0005

Identification of Possible SWMUs at NAS Fort Worth JRB

Dear Mr. Dunkle:

The purpose of this letter is to notify you of the possibility of three additional sites at Naval Air Station Fort Worth Joint Reserve Base (NAS Fort Worth JRB) - two fire training areas and a landfill. We identified these possible sites during our review of aerial photographs for our ongoing Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) activities at the base. Our findings are summarized below with the supporting visual evidence provided in Figures 1 through 9. A base map is provided as Figure 10 showing the location of these sites based on the current configuration of the Base

#### Suspected Fire Training Area A

On April 10, 1952 (Figure 1), just north of Phillips Circle and south of Hobby Shop Road, is a single plane located on what appears to be open ground. The area directly beneath the plane is dark in color while the perimeter of the area appears white. This discoloration could be the result of charring from fire training exercises.

The time period at which this area may have been used as a fire training area is unknown. A review of aerial photographs, however, before and after 1952 indicates this site existed as early as December 31, 1950 (Figure 2) and no later than January 4, 1953 (Figure 3). No planes were visible in this area as early as September 1946. Figure 2 shows two airplanes located at the site in question. The second plane is located just west of the plane identified in Figure 1. The area beneath each of these planes shows a slight disco-oration (darkening) indicating the possibility of fire training exercises. The area outside the adjacent perimeter of the suspected fire training area appears white in color. Figure 3 no longer shows any visible evidence of using this site as a fire training area, and the planes are no longer located at this site. In addition, the land appears to have been re-engineered, potentially for future construction activities. Figure 4 indicates that by February 1954, a parking area had been constructed over the site.

J Dunkle (Page 2) February 17, 1998

#### Suspected Fire Training Area B

A single plane located in a cleared triangular shaped area south of taxiway Charlie and east of taxiway 35R was identified from a December 3, 1958 (Figure 5) aerial photograph of the base. The plane is parked on what appears to be open ground. The two planes located immediately southwest of this plane are parked in the area of SWMU 18 (Fire Training Area 1). Because the single plane is located at a distance from taxiway Charlie, we suspect that this area may have served as a fire training area similar to the adjacent site located immediately southwest.

Although the time period at which this area may have been used as a possible fire training area is unknown, it did not exist on February 3, 1954 (Figure 6) and is no longer visible after August 22, 1962 (Figure 7). Aerial photographs later than 1954 and earlier than 1962 were not available for this review to further quantify the time period at which a plane(s) may have been located at this site.

#### Suspected Landfill A

On April 10, 1942, just west of the most western section of the West Fork Trinity River (prior to rerouting the river), are 8-10 trench like areas (Figure 8). These trenches are located approximately 290 feet from the roadway that runs in a north-south direction along the eastern part of the base boundary. Each "trench" is estimated to occupy an area approximately 65 feet long by 35 feet wide. The trenches are oriented in an northeast-southwest direction. Combined, the trenches occupy an area of about 30,000 ft<sup>2</sup>, or 0.69 acres. Trenches like these were often used by the military for the burial of facility refuse ranging from construction debris to industrial waste. Other base landfills were located along the river, east of this site, during the late 1940s, 1950s, 1970s, and 1980s (e.g., SWMU Nos. 28 and 30).

On April 4, 1944, (Figure 9) there is no longer any visual evidence of the trenches at this location. The area appears to have been leveled and covered with grass. In 1997, it appears that a building is being constructed over the suspected site.

Please contact me at 703-736-4507, if there is anything else we can do for you regarding these possible sites.

Sincerely,

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James P. Costello, P.G.

Project Manager

Attachments (Figures 1-10)

### \_Location of Suspected Fire Training Area A



Drawn/Scanned by. C. Farmer	Date. 12/31/97
Checked by: M. Rodtang	Date: 01/08/98

Filename AFCEE\Fire\_Training\_Area\ FTA\_fig1 cdr



Figure 1 Aerial Photograph April 10, 1952



Approximate Scale 1.8,500

### Location of Suspected Fire Training Area A

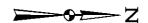


Drawn/Scanned by: C. Farmer	Date: 12/31/97
Checked by M. Rodtang	Date. 01/08/98
Filename AFCFF\Fire Training Area\	

FTA\_fig2.cdr

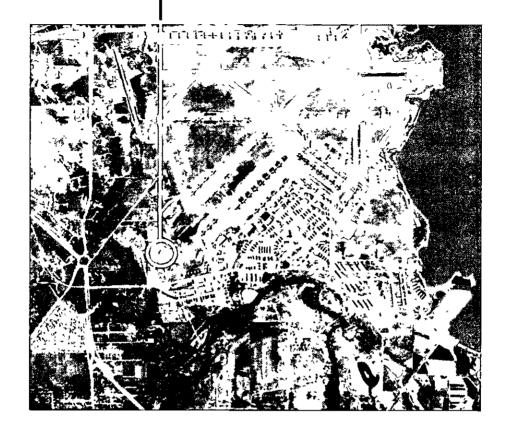


Figure 2 Aerial Photograph December 31, 1950



Approximate Scale 1.10,000

### \_Former Location of Suspected Fire Training Area A



Drawn/Scanned by: C Farmer	Date: 12/31/97
Checked by M Rodtang	Date 01/08/98

Filename AFCEE\Fire\_Training\_Area\ FTA\_fig3 cdr



Figure 3 Aerial Photograph January 4, 1953



Approximate Scale ~1:17,000

#### Former Location of Suspected\_ Fire Training Area A



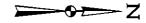
Drawn/Scanned by. Date: 12/31/97 C. Farmer Checked by Date. 01/08/98 M. Rodtang

Filename: AFCEE\Fire\_Training\_Area\

FTA\_fig4.cdr

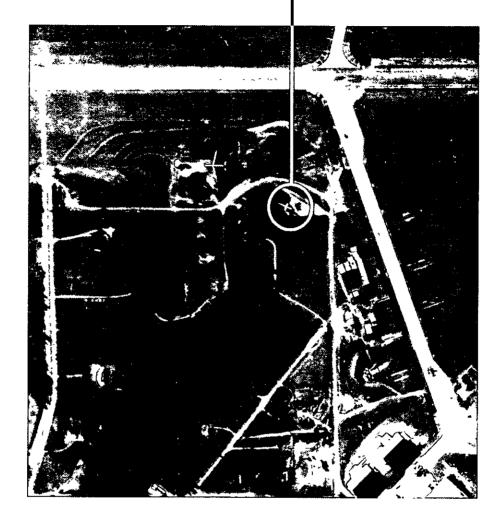


Figure 4 Aerial Photograph February 3, 1954



Approximate Scale 1 12,000

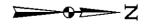
#### Location of Suspected\_ Fire Training Area B



Drawn/Scanned by. C Farmer	Date <sup>-</sup> 12/31/97
Checked by M Rodtang	Date. 01/08/98
Filename. AFCEE\Fire_Training_Area\ FTA_fig5 cdr	

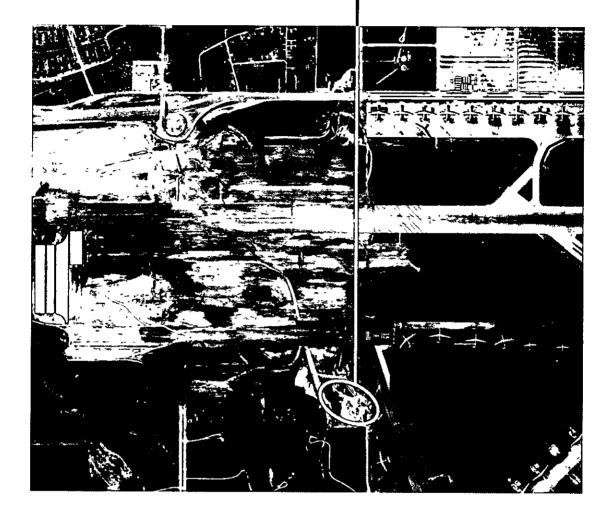


Figure 5 Aerial Photograph December 3, 1958



Approximate Scale 1.8,600

#### Future Location of Suspected Fire Training Area B



Drawn/Scanned by:
C Farmer

Checked by:
M Rodtang

Date: 01/08/98

Filename: AFCEE\Fire\_Training\_Area\

FTA\_fig6.cdr



Figure 6 Aerial Photograph February 3, 1954



Approximate Scale 1 12,000

#### \_Former Location of Suspect d Fire Training Area B



Drawn/Scanned by C. Farmer	Date 12/31/97
Checked by M. Rodtang	Date 01/08/98
Filename. AFCEE\Fire_Training_Area\	

FTA\_fig7 cdr



Figure 7 Aerial Photograph August 22, 1962



Approximate Scale 1.12,300

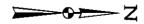
#### Location of Suspected Landfill



Drawn/Scanned by. C Farmer	Date 12/31/97
Checked by: M. Rodtang	Date. 01/08/98
Filename. AFCEE\Fire_Training_Area\ FTA_fig8.cdr	



Figure 8 Aerial Photograph April 10, 1942



Approximate Scale 1:10,000

#### \_Former Location of Suspected Landfill



Drawn/Scanned by C Farmer Date 12/31/97
Checked by. M. Rodtang Date 01/08/98

Filename: AFCEE\Fire\_Training\_Area\ FTA\_fig9.cdr



Figure 9 Aerial Photograph April 4, 1944



Approximate Scale 1.10,000

HydroGeoLogic, Inc. Former Carswell Air Force Base

Figure 10

NAS Fort Worth, JRB Base Location Map

**LEGEND** 

--- NAS Fort Worth JRB

Former Carswell Air Force Base

Surface Water

0 800 1600 SCALE IN FEET HTDRO Geologia

Filename: AFCEE\NAS Fi Worth\BaseLctn dwg Revised 02/12/98 Project: AFC001-DO5 Map Source Jacobs, 1996

LAKE WORTH 0 

## TAB

APPENDIX B

# APPENDIX B DATA QUALITY ASSESSMENT

# DATA QUALITY ASSESSMENT SITE INVESTIGATION REPORT AREA OF CONCERN 19 NAS FORT WORTH JRB, TEXAS

# 1.0 FIELD QUALITY ASSURANCE/QUALITY CONTROL

Field quality control samples were collected as described in the following sections.

#### 1.1 AMBIENT BLANK

Ambient blanks consist of American Society for Testing and Materials (ASTM) Type II reagent grade water poured into a VOC sample vial at a sampling site (in the same vicinity as the associated samples). Ambient blanks are used to assess the potential introduction of contaminants from ambient sources (e.g., active runways, engine test cells, gasoline motors in operation) to the samples during sample collection. Ambient blanks are handled like environmental samples and transported to the laboratory for analysis. Depending on the analytes of interest at the associated site(s), ambient blanks are analyzed for VOCs, benzene, toluene, ethylbenzene, and xylenes (BTEX), or methane. No ambient blanks were collected in association AOC 19 samples.

# 1.2 EQUIPMENT BLANK

An equipment blank is a sample of ASTM Type II reagent grade water poured over the sampling device, collected in a sample container, and transported to the laboratory for analysis. Equipment blanks are used to assess the effectiveness of equipment decontamination procedures. Equipment blanks are collected immediately after equipment has been decontaminated. Each blank is analyzed for all laboratory analyses requested for the environmental samples collected at the site. One equipment blank was collected per day for each type of sampling equipment used. Twelve equipment blanks were collected in association with AOC 19 samples; eight associated with soil samples and four associated with groundwater samples.

#### 1.3 TRIP BLANK

A trip blank consists of a VOC sample vial filled at the laboratory with ASTM Type II reagent grade water, transported to the sampling site, handled like an environmental sample, and returned to the laboratory for analysis. Trip blanks are not opened in the field. Trip blanks are prepared only when samples are collected and analyzed for VOC analytes. Trip blanks are used to assess the potential introduction of contaminants from sample containers or during the transportation and storage procedures. One trip blank accompanied each cooler of samples sent to the laboratory for analysis of VOCs. Twelve trip blanks were collected in association

with AOC 19 samples; eight associated with soil samples and four associated with groundwater samples.

## 1.4 FIELD DUPLICATES

Duplicate sample results are used to assess precision of the sample collection process. Precision of soil samples to be analyzed for VOCs is assessed from collocated samples because the compositing process required to obtain uniform samples could result in loss of the compounds of interest.

Duplicate samples are collected simultaneously, or in immediate succession, using identical recovery techniques, and treated in an identical manner during storage, transportation, and analysis. The sample containers are assigned an identification number in the field so that they cannot be identified (blind duplicate) as duplicate samples by laboratory personnel performing the analysis. Specific locations were designated for collection of field duplicate samples prior to the beginning of sample collection. One duplicate sample was collected for every 10 field samples collected. Six field duplicates were collected during AOC 19 SI activities; three for soil samples and three for groundwater.

#### 1.5 SAMPLE TRACKING PROTOCOL

Each sample was assigned a unique identification number that describes where and what type of sample was collected. The number that was used in the field consisted of a maximum 15 digit alphanumeric code. The alphanumeric code was truncated to 10 digits once the data was ready to be entered into the Environmental Resources Program Information Management System (ERPIMS) database. This system is explained in detail as follows:

abbbccccdd-ee

where:

a represents the medium (e.g., W=monitoring well, P = wipe sample, R = rinse sample, B = soil boring, U = surface water sample, or E = sediment sample).

bbb represents HydroGeoLogic, Inc. designation (e.g., HGL)

ccccc represents the AOC number (e.g., AOC 19.)

- dd represents the location identification (LOCID) (e.g., 01, 02)
- represents the order that the sample was obtained within the soil boring; i.e., a surface soil sample would be 01, a 5- to 7-foot sample would be 02, etc. These two digits will dropped once the data are entered into the ERPIMS database.

For example, the surface soil sample collected from the first boring advanced at AOC 19 was identified as "BHGLAOC1901-01." The sample collected from the 5 foot interval of the first soil boring advanced at AOC 19 was identified as "BHGLAOC1901-02".

Duplicate samples were submitted to the laboratory blind. In order to ensure that field duplicates were analyzed "blind" by the laboratory, each field duplicate sample was assigned a unique sample identification number that did not associate the duplicate with its parent sample. Duplicate sample numbering format is "DUPxx", where xx is a sequential number. The locations from which field duplicate samples were to be collected were determined prior to mobilization. Documentation was maintained in the field sampling logbook, and on the sample collection log, to track these field duplicate samples.

QC samples were identified by use of a similar system of identifiers with a maximum of 10 characters. The QC sampling number system is summarized below:

xxyyyyyy

where:

represents the blank type (EB for equipment blank, TB for trip blank, AB for ambient blank)

yyyyyy represents the date (month, day, year)

For example, an equipment blank obtained on May 1, 2000, would be identified as EB050100. When multiple field blanks of a particular type were collected on the same day, alphabetical suffixes (A, B, C, and so forth) were attached to the identification numbers.

The Project Geologist/Field Coordinator maintained a list detailing the connection between each QC sample and specific environmental samples. For instance, each trip blank was correlated with a particular set of samples shipped to the laboratory, and each equipment blank was correlated to those samples collected using a particular set of sampling tools on a specific date.

After the laboratory data were received and validated, data entry and QC operations were performed on the laboratory's electronic data deliverables (EDDs) to ensure that each EDD was complete, correct, and compatible with the ERPIMS format. An EDD report in the ERPIMS format will be provided to AFCEE.

## 2.0 LABORATORY ANALYSIS

Samples collected from AOC 19 were analyzed for a reduced list of 40 CFR 264 Appendix IX constituents, comprising VOCs, SVOCs, and metals/mercury as in accordance with the 2000 Basewide QAPP (HydroGeoLogic, 2000c). Specific sampling parameters for each site are listed in Section 3.0 of the SI Report.

## 2.1 ANALYTICAL PROGRAM

The data generated by this project is of sufficient quality and quantity to meet the overall project objective, which is closure of AOC 19 under the TNRCC RRS program. Data from the following categories were required for this study:

Site Characterization - Data were used to evaluate physical and chemical properties of soil. The data were also used to characterize the nature and extent of any contaminants detected.

Health and Safety - Data were used to establish the level of protection needed for the sampling team and other site-related personnel. These data were gathered by the use of organic vapor monitors during intrusive activities.

A combination of screening level data and definitive level data was used during this SI. Health and safety data were collected as screening data. All soil and water samples were analyzed following USEPA SW846 protocols. The definitions of screening data and definitive data, as established by the <u>Data Quality Objectives Process for Superfund Interim Final Guidance</u> (USEPA/540/G-93/071, 1993) are described below:

- Screening Data with Definitive Confirmation Screening data can be generated by rapid, less precise methods of analysis with less rigorous sample preparation. Sample preparation steps may be restricted to simple procedures such as dilution with a solvent, instead of elaborate extraction/digestion and cleanup. Screening data provides analyte identification and quantification. Although the quantification may be determined using analytical methods with QA/QC procedures and criteria associated with definitive data, screening data without associated confirmation data are not considered to be data of known quality.
- <u>Definitive Data</u> Definitive data were generated using rigorous analytical methods, such as approved USEPA reference methods. Data are analyte-specific, with confirmation of analyte identity and concentration. These methods produce tangible raw data (e.g., chromatograms, spectra, digital values) in the form of paper printouts or computer-generated electronic files. Data may be generated at the site or at an off-site location, as long as the QA/QC requirements are satisfied. For the data to be definitive, either analytical or total measurement error must be determined.

The data generated by the laboratory analysis of samples were sufficiently sensitive to allow comparison of the results to the TNRCC RRS. The 2000 Basewide QAPP (HydroGeoLogic, 2000c) describes each method that was performed as part of the investigation and outlines the quality assurance measures the contract laboratory must follow. The methods of analysis selected for samples collected from NAS Fort Worth JRB produced screening as well as definitive data.

# 2.2 QUALITY ASSURANCE/QUALITY CONTROL PROGRAM

The primary project QA/QC document is the 2000 Basewide QAPP (HydroGeoLogic, 2000c). This document was originally released in 1998 and was based on versions 1.1 and 2.0 of AFCEE's Model QAPP, with some base-specific modifications and updates. The 2000 version of the QAPP incorporates elements of the AFCEE Modal QAPP, version 3.0, and updates to SW-846 methods. This document is supplemented by the laboratory's Quality Assurance Plan. Together, these two documents detail the requirements that must be followed in order to generate data of the level of quality required to support the project decision-making process. Among the requirements contained in these documents is the requirement for review of the data at several levels at the laboratory. Each benchtop chemist is responsible for a 100 percent review of all data generated, as is each laboratory section manager (or designee). Subsequent to analyst review, 10 percent of data are reviewed by the laboratory QA department prior to assembly of each data report. Each final data report is reviewed by the laboratory project manager prior to release from the laboratory.

# 2.2.1 Laboratory QA/QC Program

The laboratory QA/QC program was maintained in overall accordance with the 2000 Basewide QAPP. Where the laboratory performance was not in accordance with the QAPP criteria, the affected data were qualified in the data validation process. The Data Validation Reports are presented in Appendix G. In order to provide data meeting the requirements for definitive data, the following QC elements were used by the laboratory to provide QC data applicable to the analytical results: laboratory control samples (LCSs), matrix spike/matrix spike duplicate (MS/MSD) samples, surrogate recoveries, internal standard performance, method blanks and calibration, instrument tuning and calibration, second source calibration checks, confirmation columns/detectors, interference check samples, recovery tests, laboratory duplicates, and serial dilutions. A description of each laboratory QC element can be found in Section 4.0 of the 2000 Basewide QAPP (HydroGeoLogic, 2000c). The frequency and acceptance criteria for each laboratory QC element are described in general in Sections 4.0 and 8.0 of the 2000 Basewide QAPP, and in the method-specific subsections of Section 7.0 of the 2000 Basewide QAPP (HydroGeoLogic, 2000c).

# 2.2.2 QA/QC Program Performance

Evaluation of the QC and analytical data provided by the laboratory showed that there was general compliance with the QA/QC program. There were cases where individual analytes or QC elements did not meet program criteria. If these QC failures were serious enough, the laboratory performed re-analysis after attempting corrective action. Where re-analysis was not performed or corrective action was not successful, the data were qualified in accordance with the method-specific requirements of Section 7.0 and the general requirements of Section 8.0 of the 2000 Basewide QAPP (HydroGeoLogic, 2000c).

A total of 4076 data points were generated by the analyses of AOC 19 soil samples. This number includes the results from 33 field samples and 3 field duplicates. Of the data points

reported, 94 were rejected due to failure to achieve QA/QC program requirements. Total AOC 19 soil data completeness is calculated to be 97.69 percent, which exceeds the soil data completeness goal of 90 percent. The soil data set obtained for AOC 19 in May 2000, February 2001, August 2001, and December 2001 is judged to be sufficiently complete, from a QC standpoint, to be used in any subsequent decision-making process.

A total of 18 data points were generated by the analyses of AOC 19 groundwater samples. This number includes the results from 15 field samples and 3 field duplicates. Of the data points reported, none were rejected due to failure to achieve QA/QC program requirements. Total AOC 19 groundwater data completeness is calculated to be 100 percent, which exceeds the groundwater data completeness goal of 95 percent. The groundwater data set obtained for AOC 19 in February 2001, April 2001, and June 2001 is judged to be sufficiently complete, from a QC standpoint, to be used in any subsequent decision-making process.

# 2.2.3 QA Activities

On March 25 and 26, 1998, the HydroGeoLogic project chemist, assisted by a Law Engineering project chemist, performed a QA audit of the facilities and practices of the analytical laboratory, at Recra Labnet<sup>1</sup> in University Park, Illinois. The auditors reviewed the laboratory's Quality Assurance Plan, evaluated the laboratory's recent state certification performance evaluation sample results, reviewed the laboratory's standard operating procedures, and conducted an on-site inspection of the laboratory's facility. The laboratory was found to have sufficient expertise, resources, and procedures to generate definitive and legally defensible data.

# 3.0 DATA QUALITY EVALUATION

This section describes the analytical methods and quality control program utilized for the SI of AOC 19 at NAS Fort Worth JRB. The analytical methods used for the analysis of the field samples are described in the 2000 Basewide QAPP (HydroGeoLogic, 2000c).

# 3.1 DATA QUALITY EVALUATION OBJECTIVE

The objective of the Data Quality Evaluation (DQE) is to provide a professional review of the analytical data packages submitted by the laboratory. The DQE consists of a review of laboratory QC data and field QC data. This review is performed to indicate which data are usable, usable with qualification, or unusable. The analytical procedures used to generate field sample data are evaluated in accordance with the general and method-specific QC criteria listed in Sections 5.0, 6.0, 7.0, and 8.0 of the 2000 Basewide QAPP (HydroGeoLogic, 2000c).

<sup>&</sup>lt;sup>1</sup> RCRA Labnet was acquired by Severn Trent Laboratories in January 1999.

The following items of laboratory QC data are reviewed:

- Sample integrity
- Sample completeness
- Preparation and analysis holding times
- Laboratory preparation and analysis methods
- Method accuracy and precision (e.g., MS/MSDs, dilution tests)
- Laboratory performance criteria (e.g., blanks, LCS recoveries, surrogates, internal standards)
- Instrument initial and continuing calibration checks

Field QC performance is evaluated through evaluating field duplicates, field blanks, field documentation, and shipping criteria.

# 3.2 METHODOLOGY FOR DATA QUALITY ASSESSMENT

Environmental Data Services, Inc. and HydroGeoLogic validated the results for AOC 19 samples. The data were evaluated in accordance with the procedures and acceptance criteria contained in the 2000 Basewide QAPP. All results from all analytical methods were evaluated with respect to the requirements of definitive data at the equivalent of a USEPA level III review. The data review identified those data that were unusable due to serious QC deficiencies, as well as other data that were affected by QC problems but not of sufficient severity to warrant rejection. Rejected data were qualified 'R', while qualifiers of lesser severity were applied to usable data where necessary. The level III validation reports for each sample delivery group (SDG) are included in Appendix G.

Subsequent to the data validation process, the required data validation qualifiers were entered into the project database. The accuracy the validation and data entry process was checked at all stages. The "as received" accuracy of each EDD for each data package was verified by comparing the contents of each EDD to the hardcopy of that data package at a 10 percent rate. The accuracy of the validation qualifiers was also checked on the final database output at a rate of 10 percent.

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# TAB

APPENDIX C

# APPENDIX C GEOPHYSICAL SURVEY REPORT

# DRAFT

# SURFACE GEOPHYSICAL SURVEY REPORT

AOC 19 Site and SWMUs 19 & 20 Site

NAS Ft. Worth JRB (Formerly Carswell AFB)
Fort Worth, Texas

Prepared For:
HydroGeoLogic Inc.
1155 Herndon Parkway, Suite 900
Herndon, Virginia, 20170

Prepared By:
IT Corporation
312 Directors Drive
Knoxville, Tennessee, 37923

AFCEE Contract No. 41624-95-D-8005
Delivery Order 0026 & 0029
IT Project No. 800870

March 2001

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# List of Acronyms\_

AFB Air Force Base

AFCEE Air Force Center for Environmental Excellence

BGS below ground surface

CD Compact Disk

E-W east-to-west

EM electromagnetic induction

EM31 Geonics Limited EM31 Terrain Conductivity Meter

EM61 Geonics Limited EM61 High-Resolution Metal Detector

G-856AX Geometrics, Inc. G-856 Magnetometer

G-858G Geometrics, Inc. G-858G Magnetic Gradiometer

IT IT Corporation

JRB joint reserve base

mS/m milliSiemens per meter

mV mıllıVolts

ppt parts per thousand N-S north-to-south

NAS Naval Air Station

nT nanoTeslas

SWMU solid waste management unit

UST underground storage tank

UXO unexploded ordnance

# 1.0 Introduction

IT Corporation (IT) performed surface geophysical surveys at the AOC 19 and Solid Waste Management Unit (SWMU) 19 & 20 sites at Naval Air Station (NAS) Ft. Worth Joint Reserve Base (JRB) (Formerly Carswell Air Force Base (AFB)) from February 12 through 16, 2001. The surveys were conducted for HydroGeoLogic under the Air Force Center for Environmental Excellence (AFCEE) Contract No. 41624-95-D-8005, Delivery Orders 0026 and 0029.

The objective of the survey at the AOC 19 site was to locate buried metal objects potentially representing drums. The objectives of the survey at the SWMUs 19 & 20 site were to locate buried metal objects potentially representing drums and a 10,000-gallon underground storage tank (UST). The total area investigated was approximately 189,950 square feet (approximately 4.36 acres).

To accomplish the objectives of the surveys, the geophysical surveys were designed using magnetic, time-domain electromagnetic (EM), and frequency-domain EM techniques. The site maps with geophysical interpretation (Figures A-1 and B-1) show the survey areas relative to permanent site features and the locations of significant anomalies that were identified in the data.

The AOC 19 site encompasses an irregular-shaped area with topography that slopes up to the north and west. The AOC 19 survey area was bounded on the south and east by a chain link fence and on the west and north by a road, as shown on the site map with geophysical interpretation (Figure A-1). The SWMUs 19 & 20 site is grass covered and has a gently sloped mound, which covers most of the site.

Field procedures used to conduct the survey are described in Section 2.0. Data processing methods used for the survey are presented in Section 3.0. The geophysical survey results are presented in Section 4.0. Conclusions derived from the geophysical survey are presented in Section 5.0.

- Appendices A and B: Site Maps showing the Geophysical Interpretation and data contour maps for the sites investigated.
- Appendix C: Magnetic Base Station Plots
- Appendix D. Theoretical Background of the geophysical techniques used in this investigation.

# 2.0 Field Procedures

This section describes the field procedures and instruments used to conduct the geophysical surveys.

# 2.1 Survey Control

Initially, the geophysics crew established base grids on 100-foot centers throughout the sites. Using the base grid as a reference, the crew marked control points on 10-foot centers with surveyors' paint to provide the required resolution for the investigation. Due to the uncertainty of true field positions inherent when establishing a survey area using 300-foot fiberglass tapes in the presence of wind and surface obstructions (e.g. utility poles, monitoring wells), the lateral precision for the survey areas and anomalies is believed to be within +/- 2 feet

Detailed, hand-sketched site maps were drawn in the field. The maps included any surface cultural features within the survey areas, or near their perimeters that could potentially affect the geophysical data (e.g., overhead utilities, manhole covers, monitoring wells). The maps also show reference features, such as roads and fences that could later aid in reconstructing the site boundaries. All reference information documented on the hand-sketched site maps was translated to the site interpretation maps.

# 2.2 Geophysical Survey Design and Instrumentation

Survey Equipment. Magnetic instruments used during the investigation consisted of a Geometrics G-858G magnetic gradiometer (G-858G) for survey data acquisition, and Geometrics G-856AX magnetometer (G-856AX) for collecting base station data. Time-domain EM equipment used to conduct the investigation consisted of a Geonics EM61 high sensitivity metal detector (EM61) coupled to an Omnidata DL720 digital data logger. Frequency-domain EM equipment used to conduct the investigation consisted of a Geonics EM31 terrain conductivity meter (EM31) coupled to an Omnidata DL720 digital data logger. Where required, a Metrotech 9860-BRL EM utility locator was used to verify that linear anomalies seen in the EM31/EM61 data were caused by subsurface pipelines.

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All geophysical data were collected in accordance with the methods and procedures outlined in the following IT Standard Operating Procedures:

• ITGP-001: Surface Magnetic Surveys

• ITGP-002: Surface Frequency-Domain Electromagnetic Surveys

• ITGP-004: Surface Time-Domain Electromagnetic Surveys

• ITGP-012: Geophysical Data Management.

Field Instrument Base Station. A field instrument base station was established at each site to provide quality assurance/quality control of the geophysical data. Prior to collecting the base station data, the instruments were used to determine that the location was clear of surface and subsurface cultural interference (e.g., fences, utilities, and surface/buried metal objects). Standard field procedures were used to take readings at the base station with each instrument (G-858G, EM61, and EM31) before and after each data collection session. These opening and closing base station files were reviewed as the survey progressed to assure proper instrument operation during each survey period. Average readings for each base station file were recorded on the base station summary form and are contained in project files.

Magnetic Base Station. A magnetic base station was used to record the diurnal variation in the Earth's magnetic field during the G-858G magnetic gradiometer survey. The magnetic base station was established at a location determined to be clear of surface and subsurface cultural interference (e.g., fences, utilities, and surface/buried metal objects). The G-856AX base station magnetometer was time-synchronized with the G-858G field survey instrument and programmed to record the Earth's background magnetic field at 10-second intervals during magnetic survey. These base station data were later used during data processing to "drift-correct" the G-858G survey data for variations in the Earth's magnetic field. Plots of the base station data are presented in Appendix C.

G-858G Data Collection. Prior to and immediately following each survey session, 60 readings of total magnetic field data were recorded with the G-858G at the field instrument base station. Evaluation of the base station data indicates the instrument was operating properly during the survey and that instrument drift was within acceptable limits. The spacing between the two G-858G sensors was 2.5 feet (0.76 meters) during the investigation, with the lower sensor at approximately 2.0 feet and the upper sensor at approximately 4.5 feet above the ground surface. Magnetic survey data were collected at 0.5-second (approximately 2.0- to 2.5-foot) intervals along north to south (N-S) oriented survey lines, spaced 5 feet apart, for a total of

approximately 39,210 linear feet of survey coverage. Magnetic data were stored in the internal memory of the G-858G, along with corresponding line and station numbers and the time of acquisition. Field and magnetic base station data were downloaded to a personal computer, backed up on Iomega\* compatible zip disks, copied to compact disc (CD), and are retained in project files.

EM61 Survey. Prior to and immediately following each survey session, 20 readings of the potential difference were recorded from the top and bottom coils of the EM61 at the field instrument base station. Evaluation of the base station data indicates the instrument was operating properly during the survey and that instrument drift was within acceptable limits. EM61 data were collected in the wheel mode at 2 5-foot station intervals along N-S and east to west (E-W) oriented survey lines, spaced 5 feet apart, for a total of approximately 79,230 linear feet of survey coverage. Data were stored in the digital data logger programmed with corresponding line and station numbers. EM61 data were downloaded to a personal computer, backed up on Iomega\* compatible zip disks, copied to CD, and are retained in project files.

EM31 Survey. Prior to each survey session, the EM31 was calibrated, the in-phase component was zeroed, and 20 readings of conductivity and in-phase component data were collected at the field instrument base station. Following each survey session, EM31 closing base station data were collected to verify that the EM31 was operating properly and to provide a quantitative record of instrument variation, or drift, during the survey period. Evaluation of the EM31 base station data indicates the instrument was operating properly during the survey period. The EM31 survey was conducted in the vertical dipole mode and data were collected at 5-foot intervals along N-S and E-W oriented survey lines, spaced 10 feet apart, for a total of approximately 39,090 linear feet of survey coverage. Data were stored in the digital data logger programmed with corresponding line and station numbers. EM31 data were downloaded to a personal computer, backed up on Iomega® compatible zip disks, copied to CD, and are retained in project files.

# 2.3 Anomaly Verification

Following the field surveys, preliminary color-contour maps of magnetic, EM61, and EM31 data representing the site were plotted and field-checked to differentiate between anomalies caused by known surface features and those caused by subsurface source materials.

# 3.0 Data Processing

Contour maps of magnetic, EM61, and EM31 data were generated using the OASIS Montaj® geophysical mapping system from Geosoft, Inc. These maps were color-enhanced to aid with interpreting subtle anomalies. Select contour maps data are presented as Figures A-2 through A-10 and B-2 through B-10.

A series of data processing steps were required to generate the contour maps. G-858G magnetic gradiometer data were downloaded from the field instrument, corrected for diurnal drift, and then converted to an ASCII format file using the Geometrics, Inc. MAGMAP 2000® program. EM61 and EM31 data were downloaded from the data loggers and converted to ASCII format files using DAT61® and DAT31® software from Geonics, Inc. The ASCII data files were then reviewed so that line numbers, station ranges, and overall data quality could be assessed. Field data file names and corresponding base station data files were recorded on the data file tracking form. Data screening results were recorded on the base station summary form. Following data quality assessment, geometry corrections to field data files were made, if necessary, using a text editor and recorded on the Geophysical Data Editing Form

Final, corrected magnetic and EM data files containing local geophysical station coordinates (X,Y) and the geophysical measurement (Z) were converted to OASIS Montaj<sup>®</sup>. XYZ format and imported into the geophysical mapping software. The data were bi-directionally gridded with an Akima spline. The grid cell size was 1.25 feet for the magnetic and EM61 data, and 2.5 feet for the EM31 data. The names of files generated and processing parameters used were recorded on data processing forms. All completed forms of magnetic and EM data collected during the investigation are retained in project files.

Due to the complexity of the some magnetic anomalies, enhanced data processing was conducted on the Pre-Removal survey magnetic field data using the Geosoft UX Detect® interpretation software. The UX Detect® software performs inverse modeling by calculating 3-dimensional gradients of the magnetic data, determining the peak gradient locations, and then performing Euler deconvolution to solve for the apparent depth of the source material of the anomaly. The contour map of 3-dimensional magnetic gradient is most useful in reducing the complex magnetic response seen in total field magnetic data to a likely source area.

Enhanced data processing was performed on the EM61 data to aid with the depth determination of geophysical anomalies and provide for more accurate interpretations of metal concentrations. The UX-Detect\* program, as applied to EM61 data, performs modeling by calculating the

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difference in the data response between the top and bottom coils, determining the peak locations, then applying depth algorithms that use ratio response curves for both receivers to solve for the apparent depth of the source material.

# 4.0 Geophysical Survey Results

This section describes the methods used to interpret the magnetic and EM data collected at NAS Ft. Worth JRB (Formerly Carswell AFB). The geophysical interpretation maps (Figures A-1 and B-1) are based on the combined results of the instruments used to conduct the surveys. Interpreted contour maps of the geophysical data are presented in Appendices A and B. The theoretical background section (Appendix D) describes the factors influencing the observed geophysical response for the various methods used

# 4.1 Interpretation Method

Anomalies shown on the magnetic and EM contour maps range from high to low values and from negative to positive, depending on the type of data displayed. The observed anomalies in the contour map of total magnetic field for the upper sensor have values above and below the average magnetic field intensity of 50,600 nanoTeslas (nT) for north central Texas during the survey periods The typical magnetic data response to near-surface ferrous metallic debris is an asymmetric south high/north low signature. The shape and amplitude of an induced magnetic anomaly over a ferromagnetic object depend on the geometry, size, depth, orientation, and magnetic susceptibility of the object. The upper sensor is generally more useful for interpreting larger source objects such as landfill areas, underground storage tanks, and drums. The lower sensor is generally more useful for interpreting small, near-surface source objects, such as scrap metal and unexploded ordnance (UXO). Used together, both are diagnostic for estimating the size and depth characteristics of ferrous source materials. Typically, an increase in total magnetic field, particularly in the upper sensor, indicates an increase in the volume of ferromagnetic materials in the study area. However, this increase in field intensity can also be caused by source materials located closer to the surface. To better understand G-858G upper sensor magnetic field variations, other data such as the G-858G lower sensor, EM61 and EM31 data were also analyzed Although contour maps of the G-858G lower sensor and vertical magnetic gradient were interpreted, only the map of upper sensor data are presented since it is the most useful for locating drum-sized objects.

The characteristic EM61 response over a buried metal object shows a positive-amplitude signal, with the amplitude being dependent on the size of the object, distance from the transmitter/receiver coils, and the type of metal. Upper and lower receiver coil readings are processed to determine a differential value that can be used to estimate the depth of source objects. Although all EM61 data were evaluated during interpretation, only the bottom coil EM61 data are presented, since the bottom coil is most sensitive to buried metal objects.

The characteristic EM31 anomaly over a near-surface metallic conductor consists of a narrow zone having strong negative amplitude centered over the target and a broader lobe of weaker, positive amplitude on either side of the target. As the depth of the target feature increases, the characteristic EM31 response often changes to a positive amplitude centered over the target. For this type of investigation, EM31 data are generally more useful for interpreting small pits containing more than one drum.

# 4.2 Data Interpretation

This section discusses the general characteristics of the geophysical data and describes the geophysical characteristics specific to each anomaly identified on the magnetic and EM contour maps.

The site maps with geophysical interpretation (Figures A-1 and B-1) contain detailed information about known surface features. The information contained on the site maps was translated from the hand-sketched site maps generated in the field. The anomalies shown on the site interpretation maps correspond to those shown on the data contour maps.

The magnetic and EM data contour maps show several low- to high-amplitude anomalies throughout the sites. Some of these anomalies are caused by known surface features (i.e., fences and manhole covers) and subsurface pipelines/utilities and are indicated as such on the data contour maps.

The anomalies observed in the contour map G-858G total magnetic field data and the analytic signal best depict the relative concentrations of metal at the site. The EM61 potential difference data most accurately show the boundaries and relative depth of the near-surface metallic source objects. The EM31 conductivity and in-phase component data are useful in distinguishing pipeline trends and determining whether anomalies seen in EM61 data represent continuous or nearly continuous source objects (i.e., small pit containing more than one drum-sized object) or simply a large number of point sources.

#### 4.2.1 AOC 19 Anomalies

The geophysical anomalies identified in the data are indicated on the data maps and interpretation map as Anomalies A-1 through A-15. These anomalies are interpreted to be caused by buried metal objects large enough to represent individual drums or pits containing more than one drum. Ten of the anomalies are contained within the AOC 19 site boundaries, while the remaining five are perimeter anomalies, which trend offsite. The site map with

geophysical interpretation (Figure A-1) shows the boundaries and relative concentrations of buried metal at the site.

Anomaly A-1. Anomaly A-1 consists of two individual anomalies that occur at (365N, 177E) and (341N, 157E). Anomaly A-1 occurs as multiple magnetic anomalies with responses, which vary from 350 to 1,500 nT (Figure A-2). Anomaly A-1 is interpreted as moderate concentrations of buried metal at depth.

Anomaly A-2. Anomaly A-2 is a perimeter anomaly located at approximately (365N, 123E). Anomaly A-2 occurs as a low-amplitude anomaly in the magnetic data with a response of approximately 193 nT (Figure A-2). Anomaly A-2 has a moderate-amplitude response in the EM61 data of approximately 237 milliVolts (mV) (Figures A-4 and A-5). EM61 UX-detect depth modeling indicates that the source objects are approximately 1 to 2 feet below ground surface (bgs) (Figure A-6). Anomaly A-2 extends beyond the western boundary of the survey area, therefore the lateral extents of the anomaly cannot be determined. Anomaly A-2 is interpreted as a low concentration of buried metal.

Anomaly A-3. Anomaly A-3 is located at approximately (337N, 226E). Anomaly A-3 occurs primarily as a high-amplitude magnetic anomaly with a response of approximately 1,300 nT (Figure A-2). Anomaly A-3 also has a subtle response in the N-S EM31 inphase component data of approximately 0.7 parts per thousand (ppt) above background (Figure A-7). Anomaly A-3 is interpreted to be a low concentration of buried metal, not likely a buried drum(s).

Anomaly A-4. Anomaly A-4 consists of multiple features in the north-central portion of the site centered at approximately (295N, 135E). Anomaly A-4 occurs in the magnetic data with responses, that vary from 1,500 to 3,300 nT (Figure A-2) and in the EM61 data with responses, that vary from 100 to 3,000 mV (Figures A-4 and A-5). EM61 UX-detect depth modeling indicates that the source objects are located between 1 to 5 feet bgs (Figure A-6). Anomaly A-4 has a moderate amplitude EM31 conductivity response approximately 15 milliSiemens per meter (mS/m) below background (Figures A-8 and A-10). Anomaly A-4 occurs in the EM31 inphase component data as a moderate- to high-amplitude anomaly with a response varying from 4 ppt above background to 10 ppt below background (Figures A-7 and A-9). Portions of Anomaly A-4 extend beyond the boundaries of the survey area, therefore the lateral extents of the anomaly cannot be determined. Anomaly A-4 is interpreted to be caused by a high concentration of buried metal, possibly representing buried drums.

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Anomaly A-5. Anomaly A-5 consists of two individual features that are centered at approximately (255N, 170E) and (256N, 190E) Anomaly A-5 occurs as two high-amplitude magnetic anomalies with responses, which vary from 2,600 to 3,100 nT (Figure A-2). Anomaly A-5 is interpreted to be caused by a low concentration of buried metal, possibly representing deeply buried metal objects.

Anomaly A-6. Anomaly A-6 is a perimeter anomaly located at approximately (240N, 50E). Anomaly A-6 occurs as a moderate-amplitude anomaly with a magnetic response of approximately 900 nT and an EM61 response of approximately 220 mV (Figures A-2, A-4, and A-5). EM61 UX-detect depth modeling indicates that the source objects are located within 3 feet of ground surface (Figure A-6). Anomaly A-6 extends beyond the western boundary of the survey area, therefore the lateral extents of the anomaly cannot be determined. Anomaly A-6 is interpreted to be caused by a moderate concentration of buried metal, possibly representing buried drums

Anomaly A-7. Anomaly A-7 is located at approximately (190N, 60E) Anomaly A-7 occurs as a high-amplitude anomaly in the magnetic data with a response exceeding 3,700 nT (Figure A-2). Anomaly A-7 has a subtle response of approximately 75 mV in the EM61 data (Figures A-4 and A-5). EM61 UX-detect depth modeling indicates that the source objects are located within 3 feet of ground surface (Figure A-6). Anomaly A-7 is interpreted to be caused by a moderate concentration of buried metal, possibly representing buried drums.

Anomaly A-8. Anomaly A-8 is located at approximately (160N, 130E). Anomaly A-8 occurs as high-amplitude anomalies in the magnetic data (Figure A-2) and the EM31 data sets (Figures A-7 through A-10). The magnitude of Anomaly A-8's response cannot be determined due to the anomaly's proximity to a nearby pipeline. Anomaly A-8 is likely a utility vault or valve box, however, the possibility remains that it could be caused by buried drums.

Anomaly A-9. Anomaly A-9 consists of multiple features in the southwestern portion of the site centered at approximately (135N, 80E). Anomaly A-9 occurs in the magnetic data as several moderate- to high-amplitude anomalies with responses ranging from 600 to 1,500 nT (Figure A-2). Anomaly A-9 occurs in the EM61 data as a broad distribution of anomalies with responses in the range of 60 to 200 mV with isolated sources exceeding 1,500 mV (Figures A-4 and A-5). EM61 UX-detect depth modeling indicates that the source objects are located between 1 to 3 feet bgs (Figure A-6). Anomaly A-9 occurs in the EM31 inphase component data as a low that exceeds 3.1 ppt below background (Figures A-7 and A-9). The EM31 inphase low corresponds

with high-amplitude magnetic and EM61 anomalies indicating a high concentration of buried metal, possibly representing buried drums.

Anomaly A-10. Anomaly A-10 is located at approximately (100N, 15E) and (75N, 25E). Anomaly A-10 occurs as two moderate-amplitude magnetic anomalies with responses that range from approximately 450 to 820 nT (Figure A-2) Anomaly A-10 occurs in the EM61 data as multiple low-amplitude anomalies with responses of approximately 25 mV (Figures A-4 and A-5). EM61 UX-detect depth modeling indicates that the source objects are located between 3 to 4 feet bgs (Figure A-6). Anomaly A-10 is interpreted to be moderate concentrations of buried metal, possibly representing buried drums.

Anomaly A-11. Anomaly A-11 is a perimeter anomaly located at approximately (45N, 12E) Anomaly A-11 occurs only in the magnetic data as a high-amplitude anomaly exceeding 1,500 nT (Figure A-2). A portion of Anomaly A-11 extends beyond the boundary of the survey area, therefore the lateral extents of the anomaly cannot be determined. Anomaly A-11 is interpreted as a low concentration of buried metal trending offsite to the west.

Anomaly A-12. Anomaly A-12 is located at approximately (38N, 75E). Anomaly A-12 occurs in the magnetic data as a high-amplitude anomaly with a response of approximately 1,000 nT (Figures A-2). Anomaly A-12 occurs as a low-amplitude anomaly in the EM61 data with a response of approximately 170 mV (Figures A-4 and A-5). EM61 UX-detect depth modeling indicates that the source objects are located within 1 foot of ground surface (Figure A-6) Anomaly A-12 is interpreted as a high concentration of buried metal, not likely a buried drum(s).

Anomaly A-13. Anomaly A-13 is located at approximately (50N, 130E). Anomaly A-13 occurs as a high-amplitude magnetic dipole with a response exceeding 1,300 nT (Figure A-2). Anomaly A-13 has a moderate-amplitude response in the EM61 data of approximately 350 mV (Figure A-4 and Figure A-5). EM61 UX-detect depth modeling indicates that the source object is located between 1 to 2 feet bgs (Figure A-6). Anomaly A-13 occurs in the EM31 inphase component data as a moderate-amplitude anomaly with a response of approximately 4 ppt (Figures A-7 and A-9). Anomaly A-13 is interpreted as a high-concentration of buried metal, possibly representing a pit of buried drums.

Anomaly A-14. Anomaly A-14 is located at approximately (92N, 260E). Anomaly A-14 occurs as a low-amplitude magnetic anomaly with a response of approximately 200 nT (Figure A-2). Anomaly A-14 has moderate- to high-amplitude responses in the EM61 data ranging from approximately 500 to 2,800 mV (Figures A-4 and A-5). EM61 UX-detect depth modeling

Indicates that the source objects are located between 2 to 3 feet bgs (Figure A-6) Anomaly A-14 occurs as an EM31 inphase component anomaly with a response of approximately 2 2 ppt below background. The magnetic and EM data responses for Anomaly A-14 may be partially masked by the nearby metal fence. Anomaly A-14 is interpreted as a high concentration of buried metal, possibly representing a buried drum(s)

Anomaly A-15. Anomaly A-15 is a perimeter anomaly located at approximately (18N, 50E). Anomaly A-15 occurs in the magnetic data as a moderate-amplitude monopole with a response of approximately 900 nT below background (Figure A-2) Anomaly A-15 has a moderate-amplitude EM61 response of 300 mV (Figures A-4 and A-5). EM61 UX-detect depth modeling indicates that the source objects are located between 1 to 2 feet bgs (Figure A-6). The magnetic and EM data responses for Anomaly A-15 may be partially masked by the nearby metal fence. Anomaly A-15 extends beyond the boundary of the survey area, therefore the lateral extents of the anomaly cannot be determined. Anomaly A-15 is interpreted to be caused by a high concentration of buried metal possibly trending offsite to the south.

## 4.2.2 SWMUs 19 & 20 Anomalies

The geophysical anomalies identified in the data are indicated on the data maps and interpretation map as Anomalies B-1 through B-7. These anomalies are interpreted to be caused by buried metal objects large enough to represent individual drums, USTs or pits containing more than one drum. The site map with geophysical interpretation (Figure B-1) shows the boundaries and relative concentrations of buried metal at the site.

Anomaly B-1. Anomaly B-1 is located at approximately (307N, 177E) It occurs as a high-amplitude anomaly in both the magnetic and EM data. Anomaly B-1 has a response of approximately 2,700 nT in the magnetic data (Figure B-2) and 1,300 mV in the EM61 data (Figures B-4 and B-5). EM61 UX-detect depth modeling indicates that the source object is approximately 2 to 3 feet bgs (Figure B-6) Anomaly B-1 has a high-amplitude response in the EM31 inphase component data of 6 ppt below background (Figures B-7 and B-9) and in the conductivity data of approximately 30 mS/m below background (Figures B-8 and B-10). Anomaly B-1 is interpreted as a high concentration of buried metal possibly representing a UST or a pit of buried drums.

Anomaly B-2. Anomaly B-2 is located at approximately (265N, 205E). Anomaly B-2 has a low-amplitude magnetic response of approximately 120 nT (Figure B-2). Anomaly B-2 has an EM61 response of that exceeds 800mV (Figures B-4 through B-6). EM61 UX-detect depth

modeling indicates that the source object is approximately 1 to 2 feet bgs. Anomaly B-2 has an EM31 conductivity response approximately 10 mS/m below background and occurs in the EM31 inphase component data with a response of 3.6 ppt below background (Figures B-7 through B-10). Anomaly B-2 is interpreted as a moderate concentration of buried metal possibly representing a valve box, a utility vault, a UST or a pit of buried drums.

Anomaly B-3. Anomaly B-3 is located at approximately (33N, 0E). Anomaly B-3 occurs only in the EM61 data with a response exceeding 250 mV (Figures B-4 through B-6). EM61 UX-detect depth modeling indicates that the source object is within 1 foot of the surface. Anomaly B-3 is interpreted as a low concentration of non-ferrous buried metal, not likely a buried drum(s).

Anomaly B-4. Anomaly B-4 is located at approximately (25N, 25E). Anomaly B-4 occurs only in the EM61 data with a response that exceeds 500 mV (Figures B-4 through B-6). EM61 UX-detect depth modeling indicates that the source object is within 1 foot of the surface. Anomaly B-4 is interpreted as a low concentration of non-ferrous buried metal not likely a buried drum(s).

Anomaly B-5. Anomaly B-5 is located at approximately (40N, 25E) Anomaly B-5 occurs only in the magnetic data with a response of 550 nT (Figure B-2). Anomaly B-5 is interpreted to be caused by a low concentration of ferrous metal, not likely a buried drum(s).

Anomaly B-6. Anomaly B-6 is located at approximately (0N, 220E). It occurs as a high-amplitude anomaly in both the magnetic and EM data. Anomaly B-6 occurs in the magnetic data with a response of approximately 1,100 nT (Figure B-2) and in the EM61 data with a response of approximately 70 mV with an isolated source exceeding 1,700 mV (Figures B-4 and B-5). EM61 UX-detect depth modeling indicates that the source object is approximately 1 to 3 feet bgs (Figure B-6). Anomaly B-6 occurs as a high-amplitude anomaly in the E-W EM31 inphase data with a response of approximately 7 ppt below background (Figure B-9). Anomaly B-6 has an EM31 conductivity data response that varies from 12 mS/m below background to 14 mS/m above background (Figures B-8 and B-10). This signature is characteristic of shallow buried metal. The linear nature of Anomaly B-6 indicates the possibility that it could be caused by a section of pipeline/utility. Anomaly B-6 is interpreted as a high concentration of buried metal possibly representing a section of pipe, a small UST, or a pit of buried drums.

Anomaly B-7. Anomaly B-7 is located at approximately (20N, 265E). It occurs as a high-amplitude anomaly in both the magnetic and EM data. Anomaly B-7 occurs in the magnetic data with a response of approximately 2,700 nT (Figure B-2) and in the EM61 data with a response of approximately 1,300 mV (Figures B-4 and B-5). EM61 UX-detect depth modeling indicates that the source object is within approximately 2 feet of the surface (Figure B-6) Anomaly B-7 occurs in the EM31 conductivity data as a high-amplitude response that varies from 80 mS/m below background to 50 mS/m above background (Figures B-8 and B-10). This signature is typical of shallow buried metal. The linear nature of Anomaly B-7 indicates the possibility that it could be caused by a section of pipe. Anomaly B-7 is interpreted as a high concentration of buried metal possibly a section of pipe or a trench/pit of buried drums.

# 5.0 Conclusions and Recommendations

Surface geophysical surveys using magnetic and EM methods were conducted at the AOC 19 and SWMUs 19 & 20 sites at NAS Ft. Worth JRB (Formerly Carswell AFB) from February 12 through 16, 2001. The objective of the survey at the AOC 19 site was to locate buried metal objects potentially representing drums. The objectives of the survey at the SWMUs 19 & 20 site were to locate buried metal objects potentially representing drums and a 10,000-gallon UST. The total area investigated was approximately 189,950 square feet (approximately 4.36 acres).

Twenty-two geophysical anomalies caused by buried metal are identified on the data maps. The site maps with geophysical interpretation (Figures A-1 and B-1) show the boundaries and relative concentrations of buried metal at the sites. At the AOC 19 site, five anomalies are caused by source anomalies that extend offsite. In order to fully delineate these anomalies site expansions are recommended at the western and southern boundaries. Intrusive investigation is recommended at all anomaly locations to identify the source objects.

Detailed hand sketches were drawn in the field to document all permanent site reference features and to provide a basis for future reconstruction of the survey areas. Due to the uncertainty of true field positions inherent when establishing survey areas using a 300-foot fiberglass tapes in the presence of wind and surface obstructions (e.g., fences, monitoring wells and surface metal), the lateral precision for the survey areas and anomalies is believed to be within +/- 2 feet.

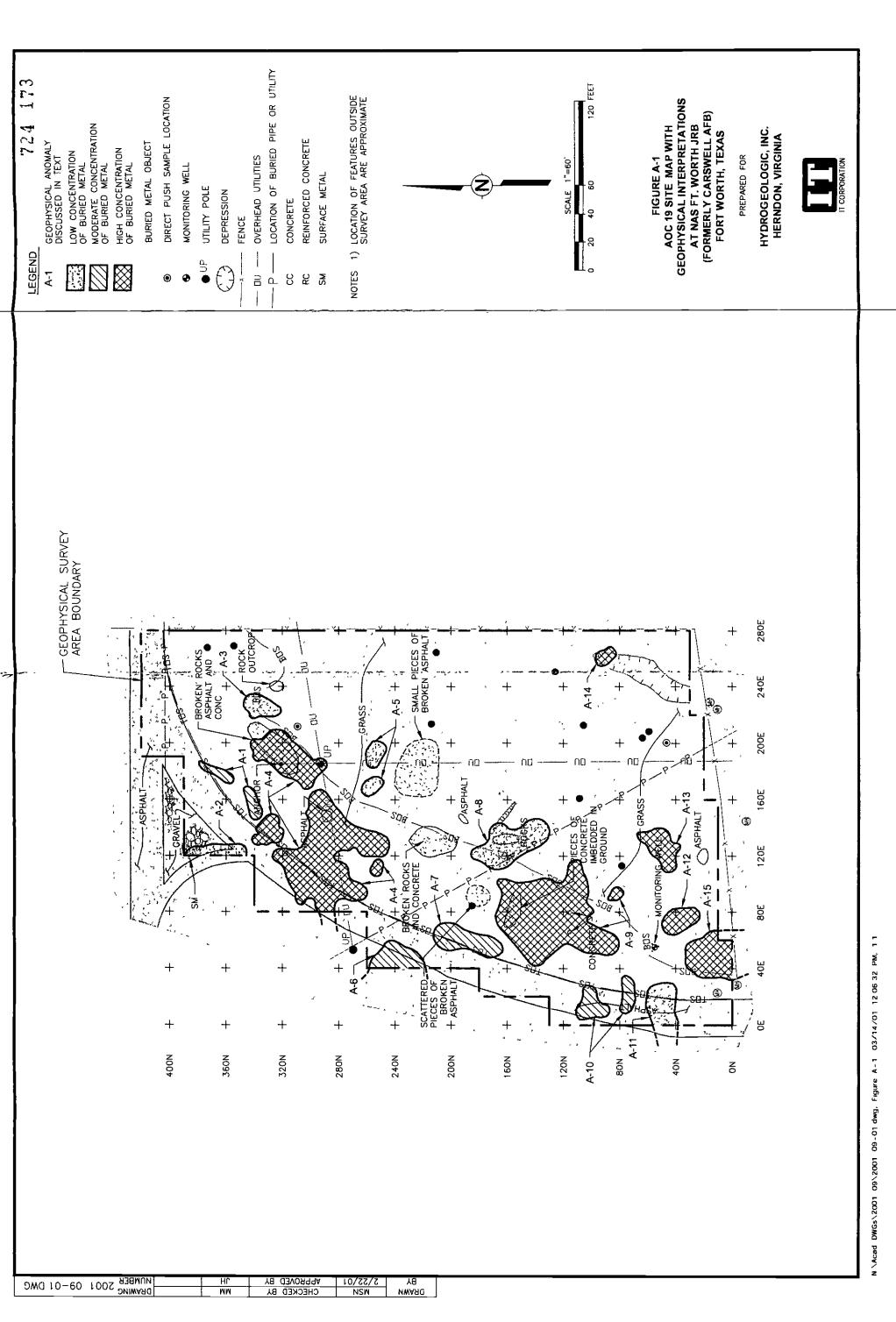
Pipelines are indicated on the site interpretation maps where evident in the geophysical data. However, the utilities shown on the maps should not be used to preclude proper geophysical clearance work at those exploratory trenching locations where buried utilities are suspect. Proper geophysical clearance work typically involves obtaining available utility maps and conducting "point" clearances with an EM utility locator and ground penetrating radar.

To relocate the survey areas and anomalies, IT recommends using the detailed information contained on the site interpretation maps (Figures A-1 and B-1).

# APPENDIX A

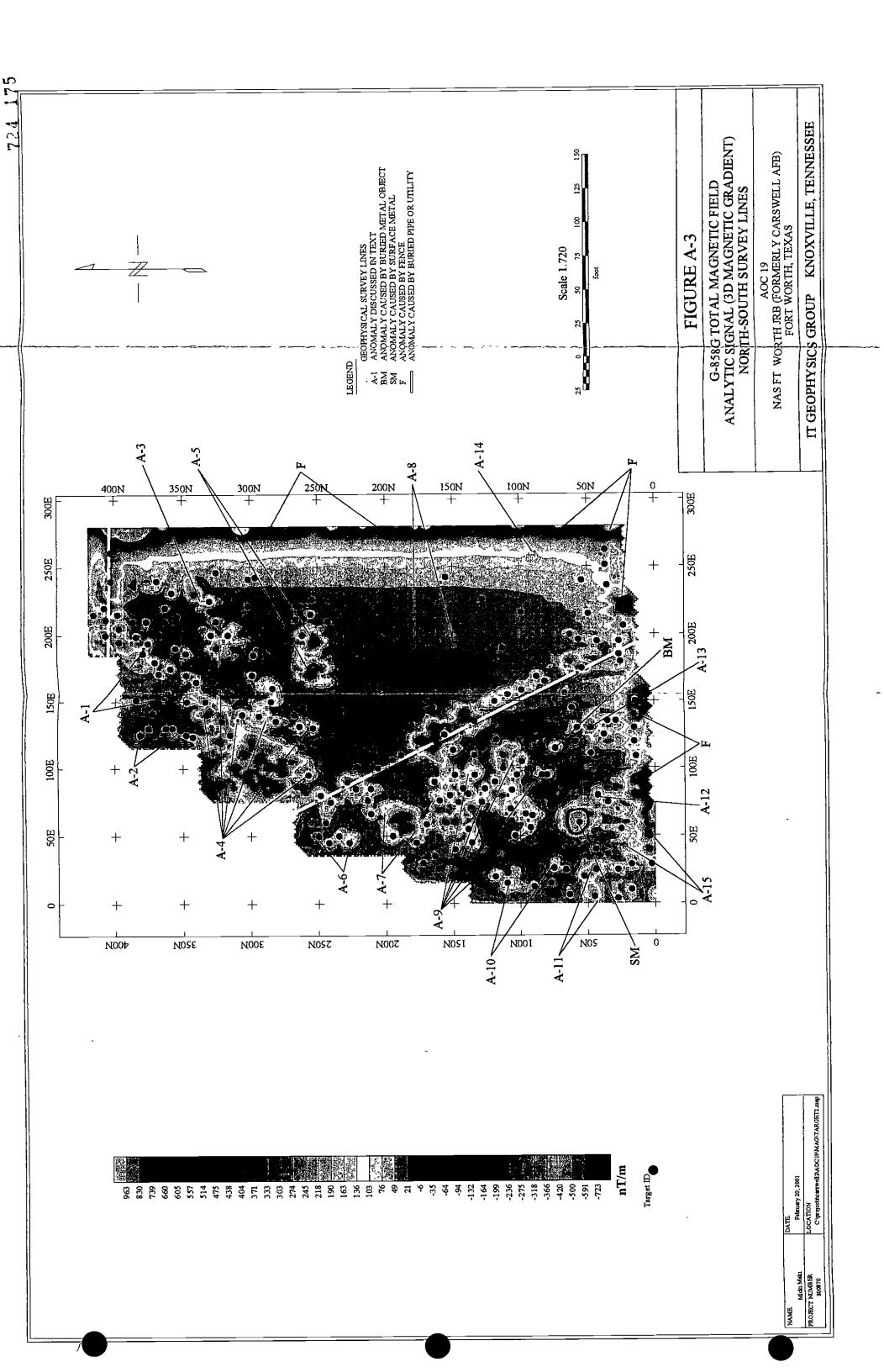
# AOC 19 Site

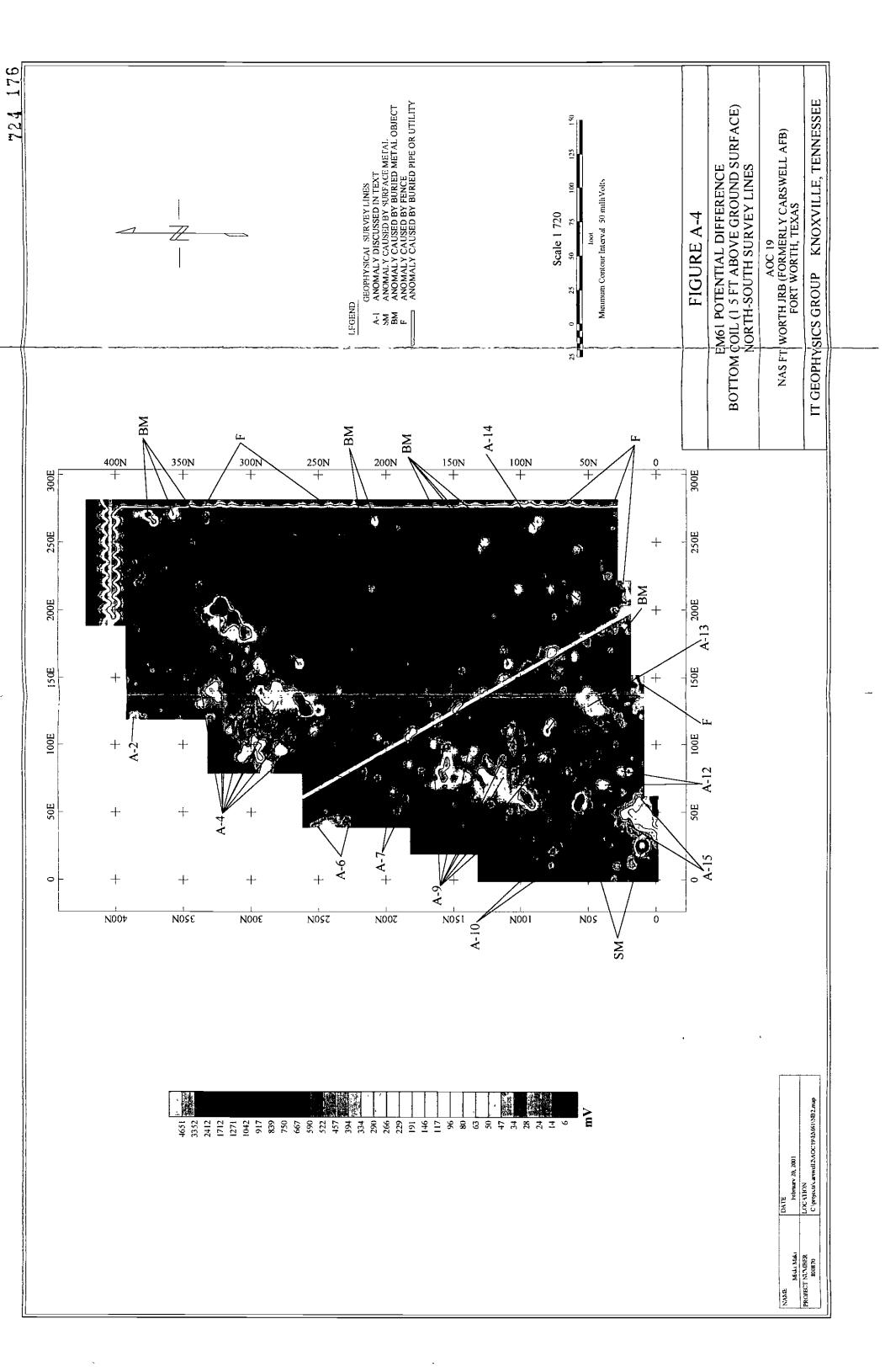
Site Map with Geophysical Interpretation
G-858G Total Magnetic Field Upper Sensor Contour Map
G-858G Total Magnetic Field Analytic Signal Map
EM61 Potential Difference Contour Maps
EM61 Target Depth Estimate Map
EM31 In-Phase Component Contour Maps
EM31 Conductivity Contour Maps

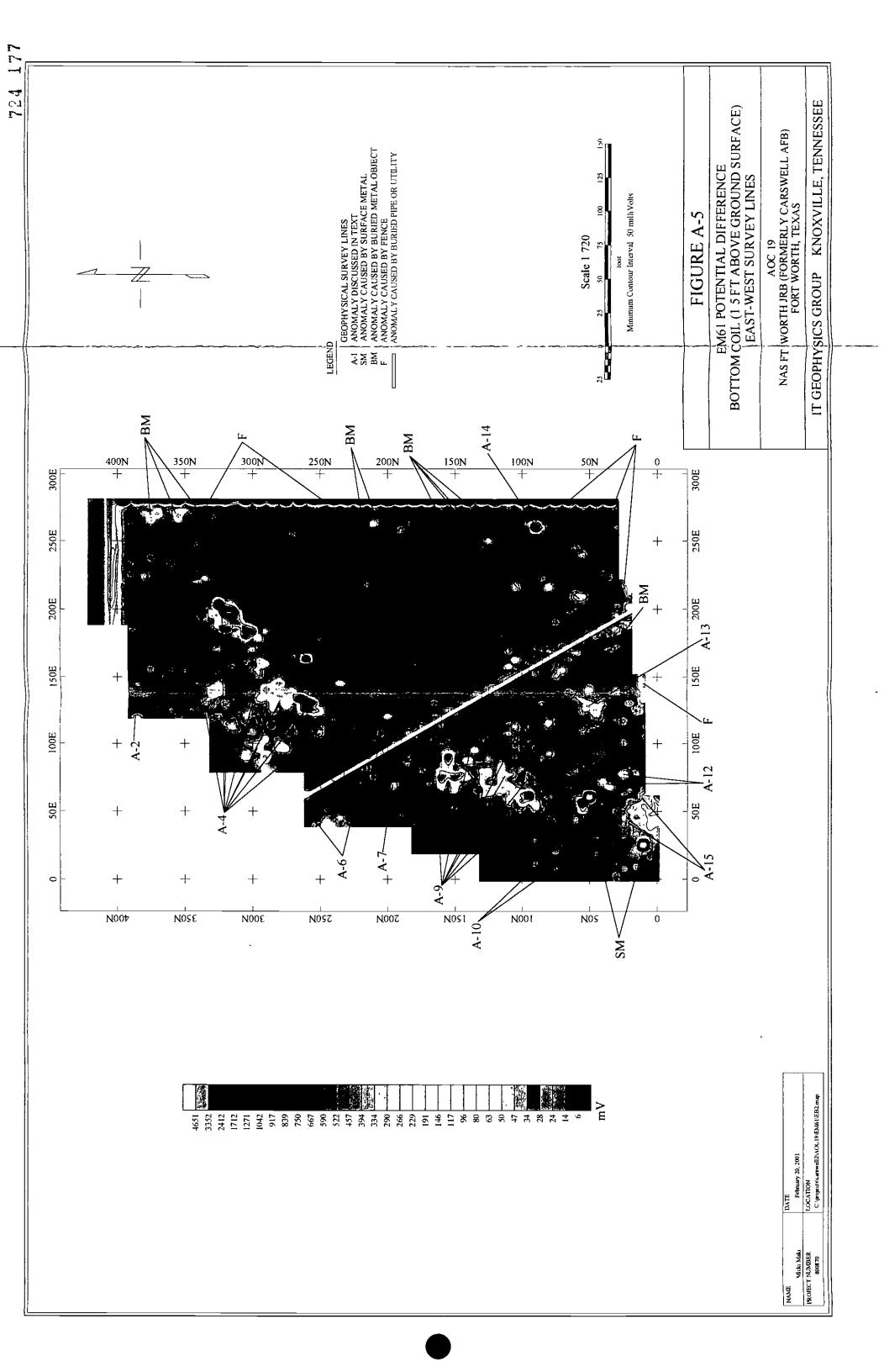


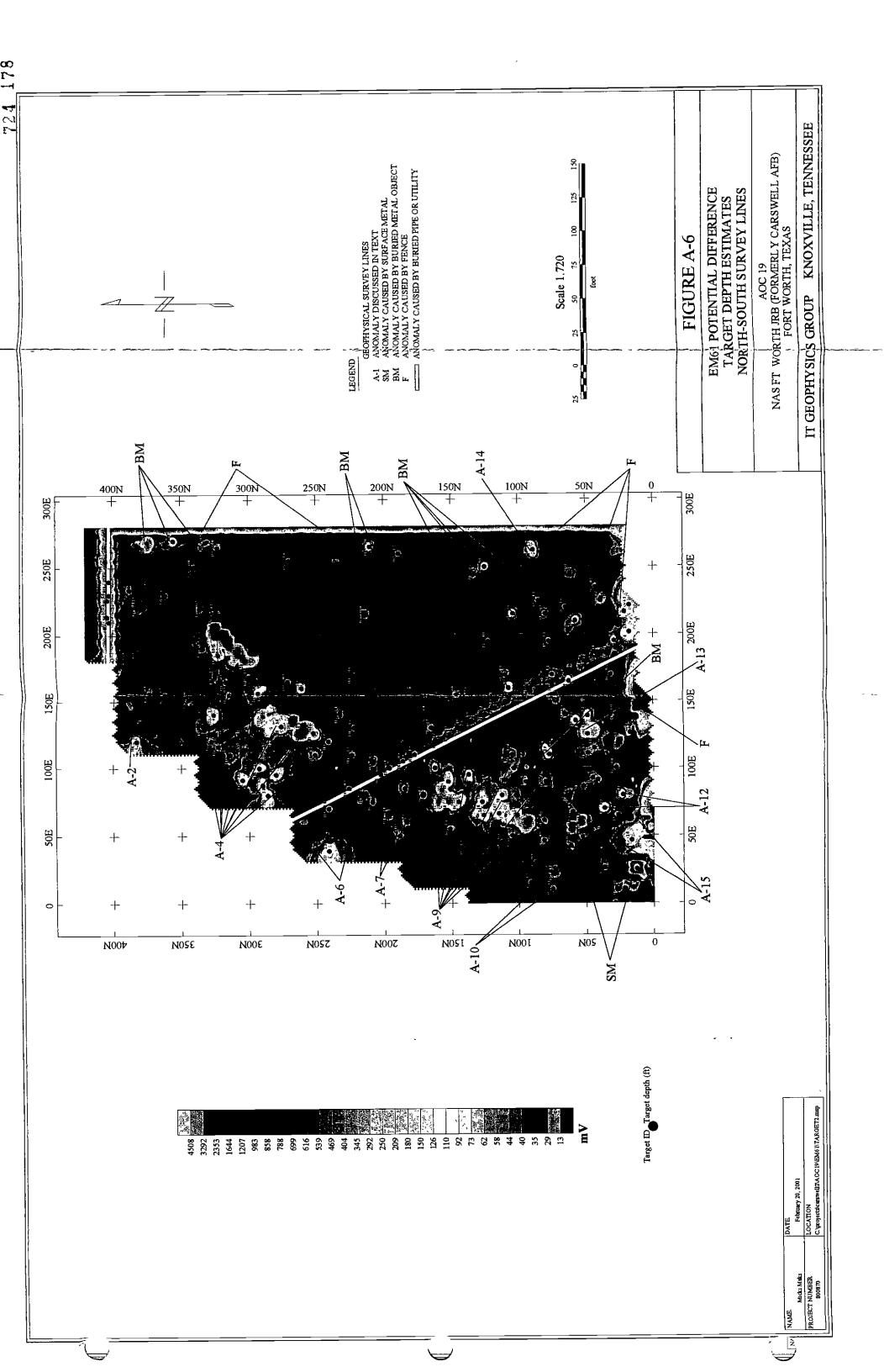


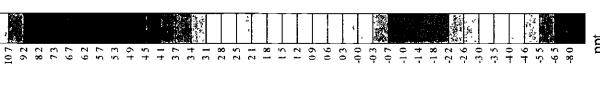
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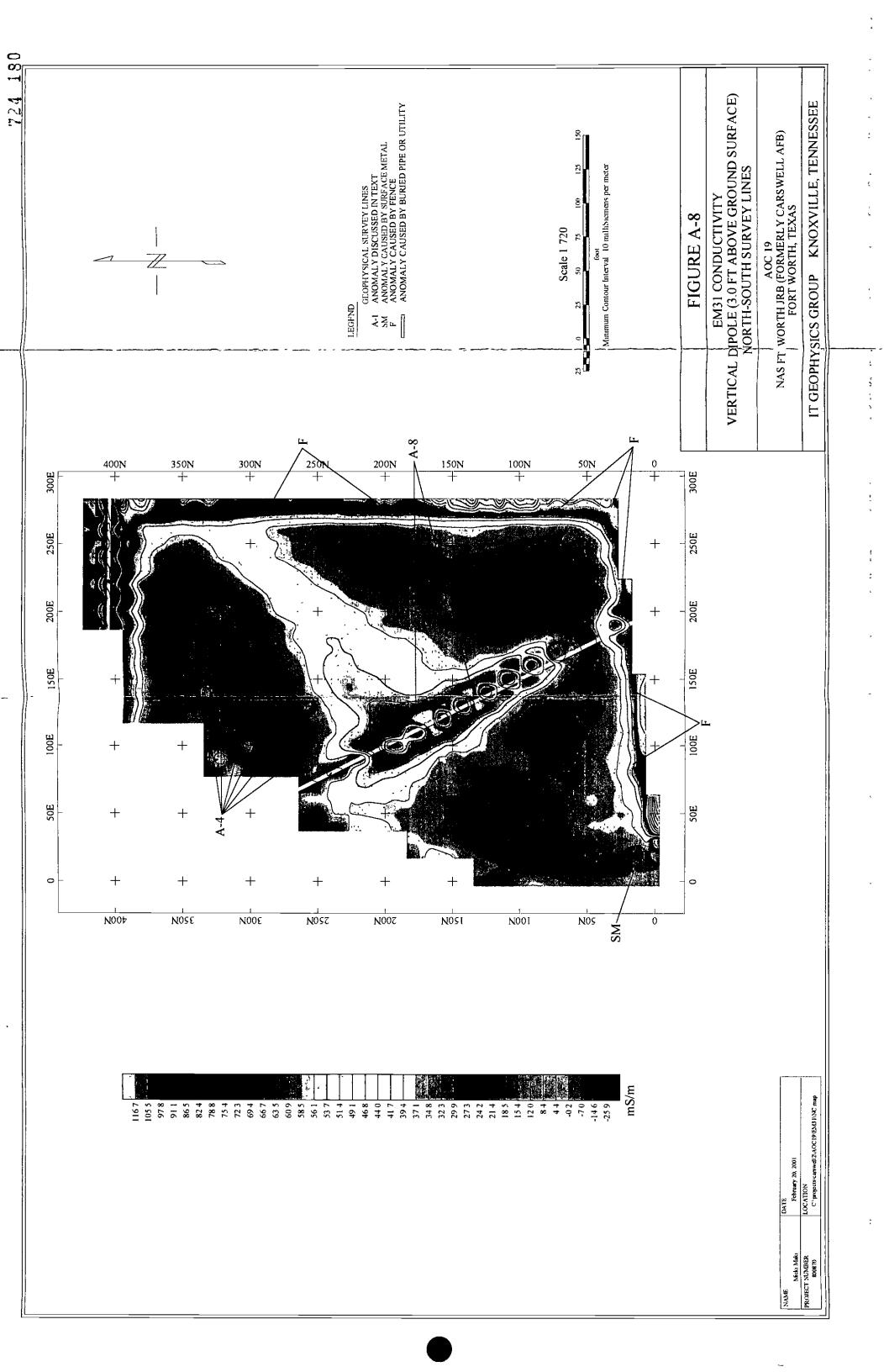


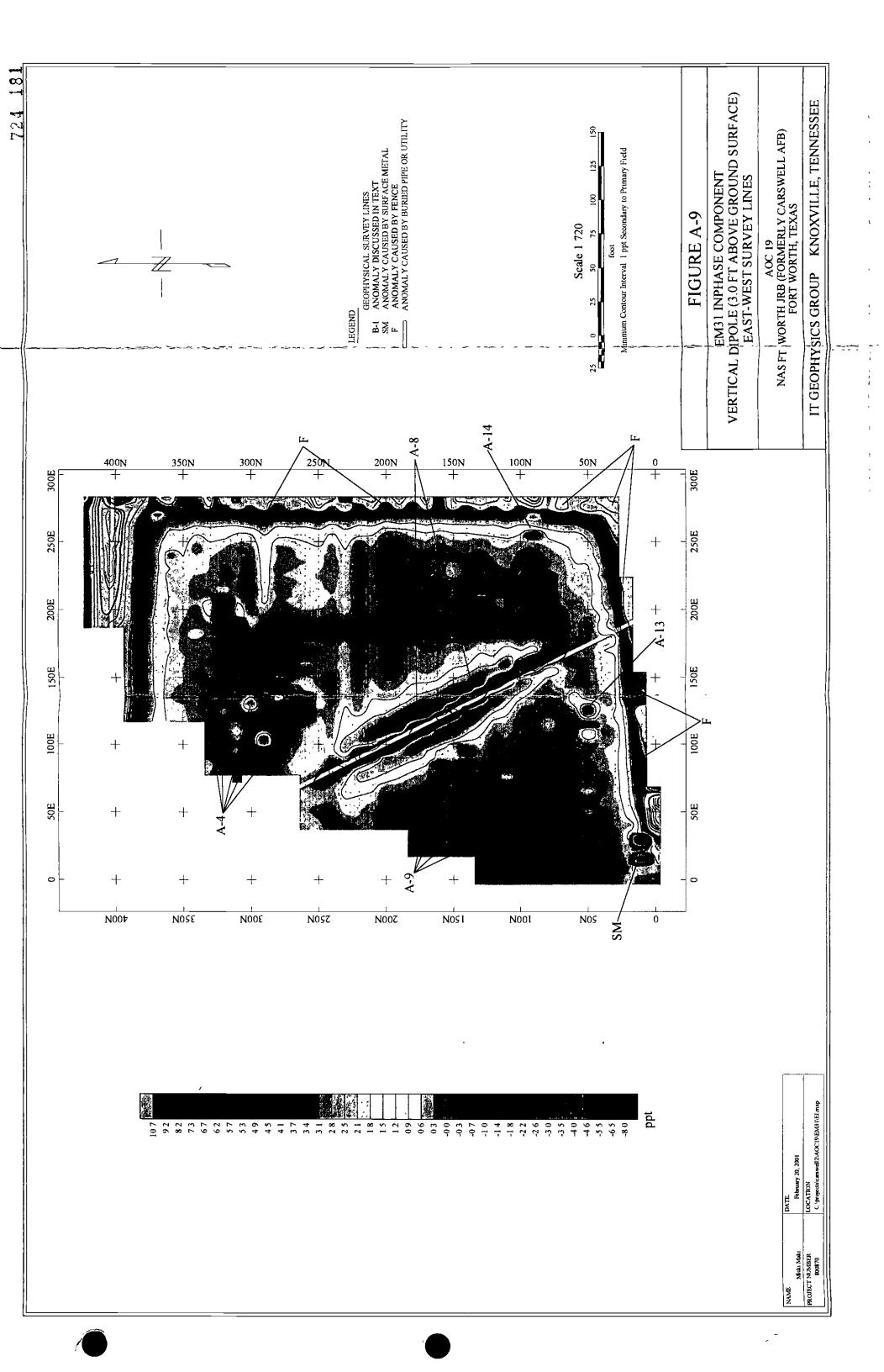


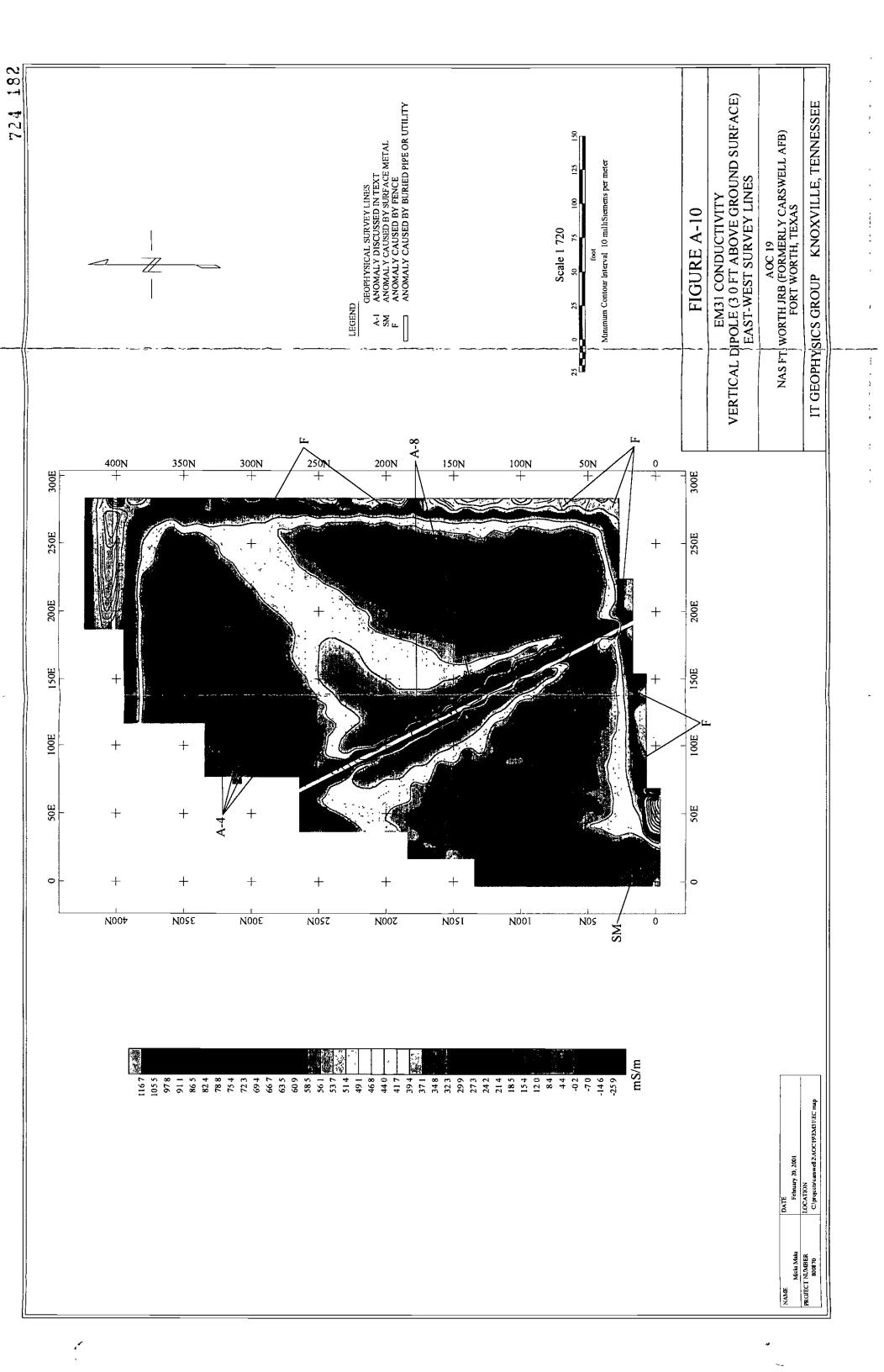




DATE	February 20, 2001	LOCATION	C \projects\canswell ZAOC19\EM31\NLmap	
NAME	Micki Maki	PROJECT NUMBER	800870	







#### APPENDIX B

#### SWMUs 19 & 20 Site

Site Map with Geophysical Interpretation
G-858G Total Magnetic Field Upper Sensor Contour Map
G-858G Total Magnetic Field Analytic Signal Map
EM61 Potential Difference Contour Maps
EM61 Target Depth Estimate Map
EM31 In-Phase Component Contour Maps
EM31 Conductivity Contour Maps

(NOT INCLUDED)

#### APPENDIX C

Magnetic Base Station Plots

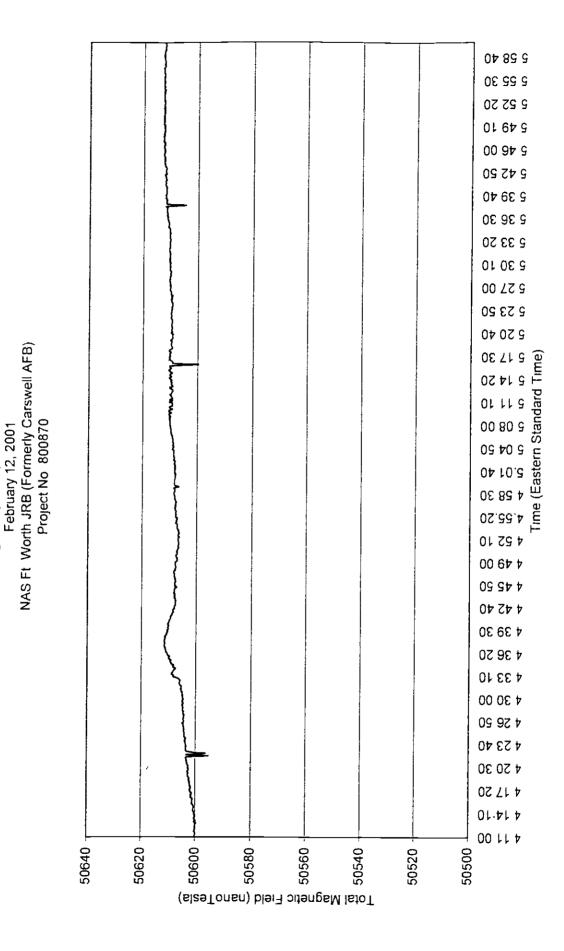


Figure C-1 Magnetic (G-856) Base Station

Figure C-2
Magnetic (G-856) Base Station
Febrauary 12,3, 2001
NAS Ft Worth JRB (Formerly Carswell AFB)
Project No 800870

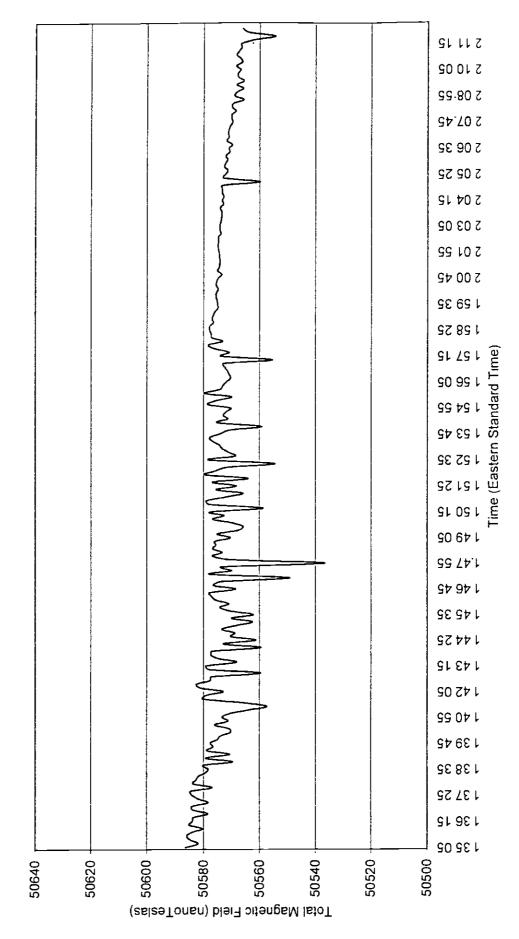


Figure C-3
Magnetic (G-856) Base Station
February 14, 2001
NAS Ft Worth JRB (Formerly Carswell AFB)
Project No 800870

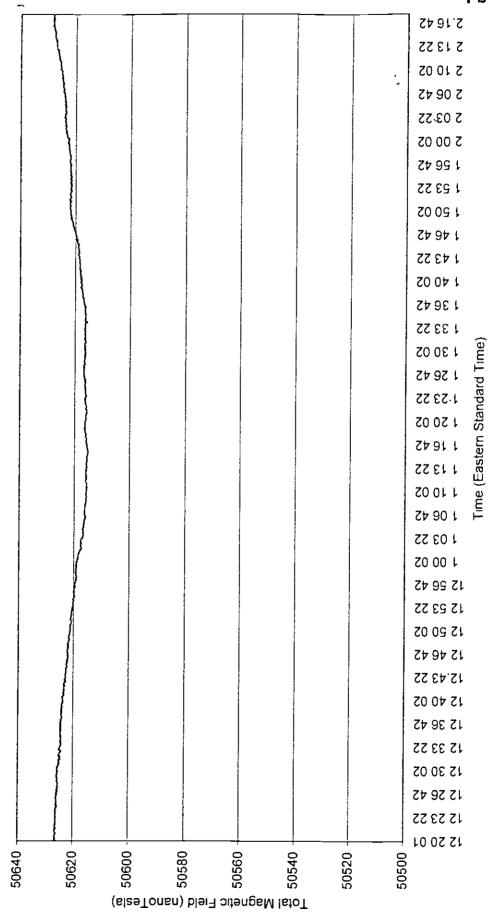
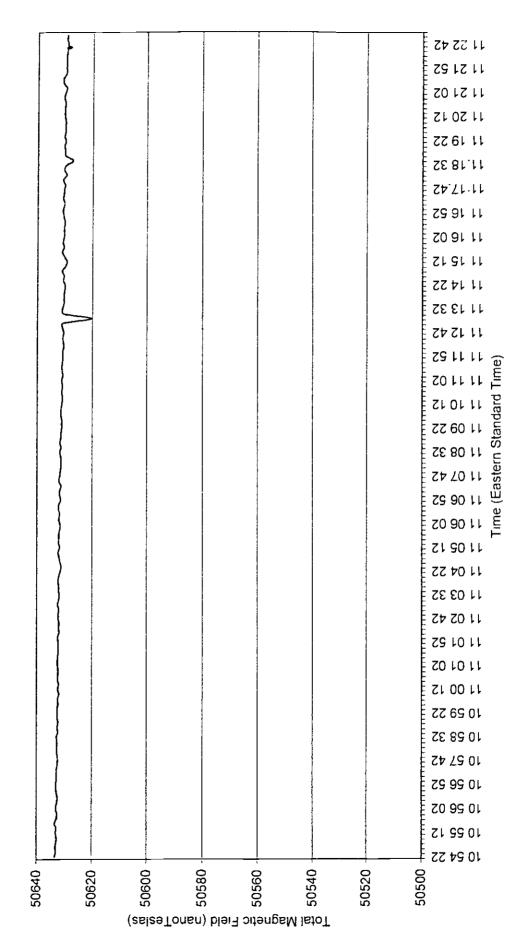


Figure C-4
Magnetic (G-856) Base Station
February 15, 2001
NAS Ft Worth JRB (Formerly Carswell AFB)
Project No 800870



## TAB

APPENDIX A: THEORETICAL BACKGROUND

## APPENDIX D THEORETICAL BACKGROUND

#### Table of Contents\_\_\_\_\_

List of	Acronyms	D-i
D.1.0	Magnetic Method.	D-1
D 2.0	Frequency-domain Electromagnetic Induction Method	D-3
D.3.0	Time-domain Electromagnetic Induction Method	D-5
D.4.0	References	D-6

RF

#### List of Acronyms\_

EM electromagnetic induction EM31 Geonics Limited EM31 Terrain Conductivity Meter EM61 Geonics Limited EM61 High-Resolution Metal Detector G-856 Geometrics Inc. G-856 Magnetometer G-858G Geometrics Inc. G-858G Magnetic Gradiometer 9860-BRL Metrotech Inc 9860-BRL EM utility locator JRB Joint Reserve Base mV millivolts milliSiemens/meter mS/m NAS Naval Air Station nΤ nanoTeslas nT/m nanoTeslas/meter parts per thousand ppt

UXO unexploded ordnance

radiofrequency

#### D.1.0 Magnetic Method

The magnetic instruments used during the Naval Air Station (NAS) Ft Worth Joint Reserve Base (JRB) surface geophysical surveys were a Geometrics, Inc., G-858G "walking mode" magnetic gradiometer (G-858G) for acquiring survey data and a Geometrics, Inc., G-856 for collecting magnetic base station data.

The G-858G, which is an optically-pumped cesium vapor instrument, measures the intensity of the Earth's magnetic field in nanoTeslas (nT) and the vertical gradient of the magnetic field in nanoTeslas per meter (nT/m). The vertical gradient is measured by simultaneously recording the magnetic field with two sensors at different heights. To determine the vertical magnetic gradient, the upper sensor reading is subtracted from the lower sensor reading, and the result is then divided by the distance between the sensors. The distance between sensors for this investigation was 2.5 feet (0.76 meters). The vertical magnetic gradient measurement allows for better definition of shallower anomalies.

During operation of the G-858G magnetic gradiometer, a direct current is used to generate a polarized monochromatic light. Absorption of the light occurs within the naturally precessing cesium atoms found in the instrument's two vapor cells or sensors. When absorption is complete, the precessing atoms become a transfer mechanism between light and a transverse radiofrequency (RF) field at a specific frequency of light known as the Larmor frequency. The light intensity is used to monitor the precession and adjusts the RF allowing for the determination of the magnetic field intensity (Sheriff, 1991)

The Earth's magnetic field is believed to originate in currents in the Earth's liquid outer core. The magnetic field varies in intensity from approximately 25,000 nT near the equator, where it is parallel to the Earth's surface, to approximately 70,000 nT near the poles, where it is perpendicular to the Earth's surface. In Texas, the intensity of the Earth's magnetic field varies from 50,000 nT to 51,000 nT and has an associated inclination of approximately 54 degrees.

Anomalies in the Earth's magnetic field are caused by induced or remnant magnetism. Remnant magnetism is caused by naturally occurring magnetic materials. Induced magnetic anomalies result from the induction of a secondary magnetic field in a ferromagnetic material (e.g., pipelines, drums, tanks, or well casings) by the Earth's magnetic field. The shape and amplitude of an induced magnetic anomaly over a ferromagnetic object depend on the geometry, size,

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depth, and magnetic susceptibility of the object and on the magnitude and inclination of the Earth's magnetic field in the study area (Dobrin, 1976; Telford, et al., 1976). Induced magnetic anomalies over buried objects such as drums, pipes, tanks, and buried metallic debris generally exhibit an asymmetrical, south high/north low signature (maximum amplitude on the south side and minimum on the north). Magnetic anomalies caused by buried metallic objects generally have dimensions much greater than the dimensions of the objects themselves. As an extreme example, a magnetometer may begin to sense a buried oil well casing at a distance of greater than 50 feet.

The magnetic method is not effective in areas with ferromagnetic material at the surface because the signal from the surface material obscures the signal from any buried objects. Also, the presence of an alternating current electrical power source can render the signal immeasurable because of the high precision required in the measurement of the frequency at which the protons precess (Breiner, 1973). The precession signal may also be sharply degraded in the presence of large magnetic gradients (exceeding approximately 600 nT/m).

The magnetic field measured at any point on the Earth's surface undergoes low-frequency diurnal variation, called magnetic drift, associated with the Earth's rotation. The source of magnetic drift is mainly within the ionosphere, and its magnitude is sometimes large enough to introduce artificial trends in survey data. The G-856 base station magnetometer was used to record this drift for removal from the G-858G survey data during processing.

Applications of the magnetic method include delineating old waste sites and mapping unexploded ordnance (UXO), drums, tanks, pipes, abandoned wells, and buried metallic debris. The method also is useful in searching for magnetic ore bodies, delineating basement rock, and mapping subsurface geology characterized by volcanic or mafic rocks.

#### D.2.0 Frequency-Domain EM Induction Method

Frequency-domain electromagnetic induction equipment used during this investigation consisted of a Geonics EM31 terrain conductivity meter (EM31) coupled to an Omnidata DL720 digital data logger. The EM31 consists of a 12-foot-long plastic boom with a transmitter coil mounted at one end and a receiver coil at the other. An alternating current is applied to the transmitter coil, causing the coil to radiate a primary EM field As described by Faraday's law of induction, this time-varying magnetic field generates eddy currents in conductive subsurface materials. These eddy currents have an associated secondary magnetic field with a strength and phase shift (relative to the primary field) that are dependent on the conductivity of the medium. The combined effect of the primary and secondary fields is measured by the receiver coil in-phase (in-phase) and 90 degrees out-of-phase (quadrature) with the primary field. Most geologic materials are poor conductors. Current flow through geologic materials takes place pnmanly in the pore fluids (Keller and Frischknecht, 1966), as such, conductivity is predominantly a function of soil type, porosity, permeability, pore fluid ion content, and degree of saturation. The EM31 is calibrated so that the out-of-phase component is converted to electrical conductivity in units of millisiemens per meter (mS/m) (McNeill, 1980), and the in-phase component is converted to parts per thousand (ppt) of the secondary field to the primary EM field. The in-phase component is a relative value that is generally set to zero over background materials at each site.

The depth of penetration for EM induction instruments depends on the transmitter/receiver separation and coil orientation (McNeill, 1980). The EM31 has an effective exploration depth of approximately 18 feet when operating in the vertical dipole mode (horizontal coils). In this mode, the maximum instrument response results from materials at a depth of approximately two-fifths the coil spacing (or, approximately 2 feet below ground surface with the instrument at the normal operating height of approximately 3 feet), providing that no large metallic features such as tanks, drums, pipes, and reinforced concrete are present. Single buried drums typically can be located to depths of approximately 5 feet, whereas clusters of drums can be located to significantly greater depths if background noise is limited or negligible. In the horizontal dipole mode (vertical coils), the EM31 has an effective exploration depth of approximately 9 feet and is most sensitive to materials immediately beneath the ground surface.

The EM31 generally must pass over or very near a buried metallic object to detect it. Both the out-of-phase and in-phase components exhibit a characteristic anomaly over near-surface metallic conductors. This anomaly consists of a narrow zone having strong negative amplitude

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centered over the target and a broader lobe of weaker, positive amplitude on either side of the target. For long, linear conductors such as pipelines, the characteristic anomaly is as described when the axis of the coil (instrument boom) is at an angle to the conductor. However, when the instrument boom is oriented parallel to the conductor, a positive amplitude anomaly is obtained.

The application of frequency-domain EM techniques includes mapping conductive groundwater contaminant plumes in very shallow aquifers, delineating oil brine pits, landfill boundaries and pits and trenches containing buried metallic and nonmetallic debris, and locating buried pipes, cables, drums, and tanks

#### D.3.0 Time-Domain EM Induction Method

Time-domain electromagnetic induction equipment used during this investigation consisted of a Geonics EM61 high-resolution metal detector (EM61) coupled to an Omnidata DL720 digital data logger. The EM61 consists of one transmitter and two receiver coils each 1-meter square. The transmitter and one receiver coil are co-incident within the instrument, the second receiver coil is separated by 0.5 meters (m). Comparison of the readings in the two receiver coils allows for discrimination between shallow and deeply buried metal objects. In operation, a pulse of current in the transmitter coil generates a primary magnetic field that induces eddy currents in nearby metallic conductors, as described by Faraday's law of induction. These eddy currents produce secondary magnetic fields that are measured by the time-dependant, decaying voltage they produce in the receiver coils. The internal electronics of the EM61 are designed such that readings are taken in a very narrow time window following transmitter turn-off. The measurement secondary fields in the absence of a primary field allows for the high sensitivity meaurements obtained with the system. Since the current ring diffuses down and outward, readings taken immediately after current shut-off are most affected by near-surface conditions and the later readings by the electrical properties of the deeper subsurface.

The EM61 is generally adjusted in the field to have a zero millivolts (mV) response over background conditions.

The EM61 depth of penetration depends primarily on the size of the target, and to a lessor degree on the type of metal (Geonics, 1997) The EM61 has an effective exploration depth in excess of 10 feet for locating large conductive features, such as tanks.

The EM61 generally must pass over, or very, near a buried metallic object to detect it. The EM61 characteristic anomaly consists of readings elevated 10 to 20 mV above background for small conductors and up to several thousand mV for large conductors, such as tanks. For mapping long, linear conductors, the EM61 data is most useful when measurements are taken perpendicular to the orientation of the conductor.

The application of near-surface time-domain EM techniques with instruments such as the EM61, includes detecting and mapping metallic objects (buried pipes, cables, drums, and tanks), and mapping the boundaries of landfill, pits or trenches containing buried metallic debris.

#### D.4.0 References

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Ulriksen, C. P. F., 1982, Application of Impulse Radar to Civil Engineering, Department of Engineering Geology, Lund University of Technology, Sweden.

# TAB

APPENDIX D: SURVEY DATA

### APPENDIX D SURVEY DATA

### HydroGeoLogic, Inc. Prime Contract No. F41624-95-D-8005 Delivery Order No. 26

#### Subcontractor: Baird, Hampton, Brown, Inc.

	Park Rully	CH WAR	S GROUND	RIM	
LOCATION	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	#3.55£\$2 \$ (\$ 2×2 € "">	And the factor of the first than the	The second secon	DESCRIPTION
BHGLAOC1901	6963046.00	2296012.77	604.11	<b>,</b>	Boring
BHGLAOC1902	6963004 26	2296068.64	601 90	<del> </del>	Boring
BHGLAOC1903	6962822.45	2296067 10	598 80		Boring
BHGLAOC1904	6962771.02	2296001 22	599.62		Boring
BHGLAOC1905	6962878.146	2295904.4	601.995		Boring
BHGLAOC1906	6962761.843	2295999.03	599.593		Boring
BHGLAOC1907	6963045.976	2296012.44	604.084		Boring
BHGLAOC1908	6962977.164	2295949 6	603.08		Boring
BHGLAOC1909	6963052 561	2295993.92	606.541		Boring
BHGLAOC1910	6963080.138	2295977.25	612.536		Boring
BHGLAOC1911	6963066.96	2296003.74	606.64		Boring
BHGLAOC1912	6963113.19	2296037.66	611.10		Boring
BHGLAOC1913	6962755.91	2295995.23	599.54		Boring
THGLAOC1901A	6962827.984	2296060.22	599.157		Exploratory Excavation
THGLAOC1901B	6962822.256	2296060.09	598 923		Exploratory Excavation
THGLAOC1901C	6962822 503	2296064.91	598.905		Exploratory Excavation
THGLAOC1901D	6962828.711	2296065.08	599.09		Exploratory Excavation
THGLAOC1902A	6962804.601	2295958.24	600.356		Exploratory Excavation
THGLAOC1902B	6962794 309	2295957.2	600.522		Exploratory Excavation
THGLAOC1902C	6962792.534	2295972.45	599.863	_	Exploratory Excavation
THGLAOC1902D	6962801.215	2295972 6	599.948		Exploratory Excavation
THGLAOC1903A	6962801.471	2295927.57	600.846		Exploratory Excavation
THGLAOC1903B	6962794.982	2295927 83	600.617		Exploratory Excavation
THGLAOC1903C	6962793.89	2295939.11	600.341		Exploratory Excavation
THGLAOC1903D	6962801.87	2295938.04	600.569		Exploratory Excavation
THGLAOC1904A	6963002 676	2295961.44	603.789		Exploratory Excavation
THGLAOC1904B	6962993.997	2295958.32	603.498		Exploratory Excavation
THGLAOC1904C	6962987.722	2295971.89	603.057		Exploratory Excavation
THGLAOC1904D	6962997.141	2295975 24	603.162		Exploratory Excavation
THGLAOC1905A	6963048.419	2296001.75	604.2		Exploratory Excavation
THGLAOC1905B	6963063.039	2296011.86	605.034		Exploratory Excavation
THGLAOC1905C	6963075.995	2295999.69	609.063		Exploratory Excavation
THGLAOC1905D	6963060.529	2295988.61	608.708		Exploratory Excavation
WHGLTA050	6963013.36	2296420.09	599.19	599.08	Monitoring Well
WHGLTA051	6962894.90	2296247.12	598.37	598.30	Monitoring Well
WHGLTA052	6962769.45	2296098.07	597.12	597 00	Monitoring Well

## TAB

APPENDIXE

### APPENDIX E ANALYTICAL DATA SUMMARY TABLES

#### **NOTES FOR TABLES E.1 AND E.2**

Sample date format: "YYYY-MM-DD"

- F = The analyte was detected, but the associated numerical value is a concentration below the reporting limit.
- J = The analyte was detected; the associated numerical value is an estimated concentration.
- R = The data are unusable due to QC deficiencies.
- U = The analyte was not detected. The associated value is the reporting limit.
- UJ = The analyte was not detected. The associated value is the reporting limit, which may be inaccurate due to associated QC deficiencies.

NA = Not analyzed

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**TABLES** 

Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

*			BHGLAOC1901 00 ft	BHGLAOC1901 00 ft	BHGLAOC1901 05 ft	BHGLAOC1901 05 ft
Method	Analyte	Unit	2000-05-12	2000-05-26	2000-05-12	2000-05-26
SW6010B	Arsenic	mg/kg	4.9 F	NA	44F	NA
SW6010B	Barium	mg/kg	44.6	NA	6 08	NA
SW6010B	Beryllum	mg/kg	0 84	NA	0.6 U	NA
	Cadmium	mg/kg	0.54 U	NA	0.07 F	NA
	Chromium, total	mg/kg	12.8	NA	12.8	NA
SW6010B	Cobalt	mg/kg	4.6 F	NA	5.2 F	NA
SW6010B Copper	Copper	mg/kg	7.4 F	NA	53F	NA
	Nıckel	mg/kg	10 F	NA	11.1	NA
SW6010B	Tin	mg/kg	12F	NA	1.6 F	NA
SW6010B	Vanadium	mg/kg	31 1 F	NA	29.5 F	NA
SW6010B	Zinc	mg/kg	22 7 F	NA	21 F	NA
SW7041	Antimony	mg/kg	0,56 UJ	NA	0.51 UJ	NA
SW7421	Lead	mg/kg	14,9 F	NA	8.8	NA
SW7471A	Mercury	mg/kg	0 04 U	NA	0.04 U	NA
	Selenium	mg/kg	0 34 UJ	NA	1.5 U	NA
	Silver	mg/kg	0 22 UJ	NA	0.2 UJ	NA
SW7841	Thallium	mg/kg	1.1 U	NA	1 UI	NA
SW8260B	1,1,1,2-Tetrachloroethane	mg/kg	NA	0.002 U	NA	0.003 U
SW8260B	1,1,1-Trichloroethane	mg/kg	NA	0.003 U	VN	0.004 U
SW8260B	1,1,2,2-Tetrachioroethane	mg/kg	NA	0.002 UJ	NA	0.002 U
SW8260B	1,1,2-Trichloroethane	mg/kg	NA	0.004 U	NA	0.004 U
SW8260B	1,1-Dichloroethane	mg/kg	NA	0.002 U	NA	0.002 U
SW8260B	1,1-Dichloroethene	mg/kg	NA	0.004 U	NA	0.004 U
SW8260B	1,2,3-Trichloropropane	mg/kg	NA	0.004 UJ	NA	0.004 U
SW8260B	1,2-Dibromo-3-chloropropane	mg/kg	NA	0.004 UJ	NA	0.004 U
SW8260B	1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	0.002 U	NA	0.003 U
SW8260B	1,2-Dichloroethane	mg/kg	NA	0.002 U	NA	0.003 U
SW8260B	1,2-Dichloropropane	mg/kg	NA	0.002 U	NA	0.002 U
SW8260B	2-Chloro-1,3-butadrene	mg/kg	NA	0.004 U	NA	0.004 U
SW8260B	2-Hexanone	mg/kg	NA	0,004 U	VN	0.004 U
SW8260B	Acetone	mg/kg	NA	0 004 U	NA	0.004 U
SW8260B	Acetomtrile	mg/kg	NA	0.033 U	NA	0.037 U
SW8260B	Acrolein	mg/kg	NA	0.082 U	VN	0.092 U
SW8260B	Acrylonitrile	mg/kg	NA	0.033 U	NA	0.037 U

Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

	And the second s		BHGLAOC1901 00 ft	BHGLAOC1901 00 ft	BHGLAOC1901 05 ft	BHGLAOC1901 05 ft
Method	Analyte	Unit	2000-05-12	. 2000-05-26	2000-05-12	2000-05-26
SW8260B	$\neg$	mg/kg	NA	0.008 U	NA	0.009 U
SW8260B	_	mg/kg	NA	0.002 U	NA	0.002 U
SW8260B		mg/kg	NA	0.003 U	NA	0.004 U
SW8260B		mg/kg	NA	0 004 U	NA	0.004 U
SW8260B	Bromomethane	mg/kg	NA	0.004 U	NA	0.004 U
SW8260B	Carbon disulfide	mg/kg	NA	0.004 U	VN	0.004 U
SW8260B	SW8260B Carbon tetrachloride	mg/kg	NA	0 004 U	NA	0.004 U
SW8260B	SW8260B Chlorobenzene	mg/kg	NA	0 005 U	NA	0.002 U
SW8260B	SW8260B Chloroethane	mg/kg	NA	0.004 U	NA	0.004 U
SW8260B	SW8260B Chloroform	mg/kg	NA	0.002 U	NA	0.002 U
SW8260B	SW8260B Chloromethane	mg/kg	NA	0.004 U	W	0.004 U
SW8260B	SW8260B cis-1,2-Dıchloroethene	mg/kg	NA	0 004 U	NA	0.004 U
SW8260B	SW8260B cis-1,3-Dıchloropropene	mg/kg	NA	0.004 U	NA	0.004 U
SW8260B	SW8260B Dibromochloromethane	mg/kg	NA	0.002 U	NA	0.003 U
SW8260B	SW8260B Dibromomethane	mg/kg	NA	0.004 U	NA	0.004 U
SW8260B	SW8260B Dichlorodifluoromethane	mg/kg	NA	0.004 U	NA	0.004 U
SW8260B	SW8260B Ethyl methacrylate	mg/kg	NA	0.004 U	VN	0.004 U
SW8260B	Ethylbenzene	mg/kg	NA	0.002 U	NA	0.003 U
SW8260B	SW8260B Iodomethane (Methyl todide)	mg/kg	NA	0.004 U	NA	0.004 U
SW8260B	SW8260B Isobutanol	mg/kg	NA	0.16 U	NA	0.18 U
SW8260B	m,p-Xylene (sum of 1somers)	mg/kg	NA	0 004 U	NA	0.004 U
	Methyl ethyl ketone (2-Butanone)	mg/kg	NA	0 004 U	AN	0 004 U
- 4	Methyl isobutyl ketone (4-Methyl-2-pentanone)	mg/kg	NA	0 004 U	NA	0 004 U
	Methyl methacrylate	mg/kg	NA	0 004 U	W	0.004 U
SW8260B	Methylacrylonitrile	mg/kg	NA	0.004 U	W	0.004 U
SW8260B	Methylene chloride	mg/kg	NA	0.002 U	NA	0.002 U
SW8260B	o-Xylene (1,2-Dimethylbenzene)	mg/kg	NA	0 004 U	NA	0.004 U
SW8260B	Pentachloroethane	mg/kg	NA	0.004 UJ	W	0.004 U
SW8260B	Propane nitrile (Propionitrile)	mg/kg	NA	0.016 U	W	0.018 U
SW8260B	Styrene	mg/kg	NA	0.002 U	NA	0.002 U
SW8260B		mg/kg	NA	0,004 U	W	0.004 U
SW8260B	Tetrachloroethene (PCE)	mg/kg	NA	0.004 U	NA	0.004 U
SW8260B	Toluene	mg/kg	NA	0.004 U	NA	0.004 U
SW8260B	Trans-1,2-Dichloroethene	mg/kg	NA	0.002 U	NA	0.003 U



Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

Analyte         Unit           Trans-1,3-Dichloropropene         mg/kg           Trans-1,4-Dichloro-2-Butene         mg/kg           Trichloroethene (TCE)         mg/kg           Vinyl acctate         mg/kg           Vinyl acctate         mg/kg           Vinyl chlorobenzene         mg/kg           1,2-4-Trichlorobenzene         mg/kg           1,2-4-Trichlorobenzene         mg/kg           1,3-5-Trinitrobenzene         mg/kg           1,3-5-Trinitrobenzene         mg/kg           1,3-5-Trinitrobenzene         mg/kg           1,4-Dichlorobenzene         mg/kg           1,4-Dichlorobenzene         mg/kg           1,4-Dichlorobenzene         mg/kg           2,2-Cyabhthylamine         mg/kg           2,2-Gybithlorophenol         mg/kg           2,4-G-Trichlorophenol         mg/kg           2,4-Dimtrophenol         mg/kg           2,4-Dimtrophenol         mg/kg           2,4-Dimtrophenol         mg/kg           2,0-Dimtrophenol         mg/kg           2,0-Dimtrophenol         mg/kg           2,0-Dimtrophenol         mg/kg           2,0-Dimtrophenol         mg/kg           2,0-Dimtrophenol         mg/kg			BHGLAOC1901 00 ft	BHGLAOC1901 05 R	RHCI AOC1001 05 6
Trans-1,3-Dichloropropene         mg/kg           Trans-1,4-Dichloro-2-Butene         mg/kg           Trichlorocthene (TCE)         mg/kg           Vinyl acctate         mg/kg           1,2,4,5-Tetrachlorobenzene         mg/kg           1,2-Dichlorobenzene         mg/kg           1,3-Dichlorobenzene         mg/kg           1,3-Dichlorobenzene         mg/kg           1,3-Dichlorobenzene         mg/kg           1,3-Dichlorobenzene         mg/kg           1,4-Dichlorobenzene         mg/kg           1,4-Dichlorobenzene         mg/kg           1,4-Dichlorobenzene         mg/kg           1,4-Dichlorobenzene         mg/kg           1,4-Dichlorobenzene         mg/kg           2,2-Oxybis(1-chlorophenol         mg/kg           2,4-Dirichlorophenol         mg/kg           2,4-Dimitrophenol         mg/kg           2,4-Dimitrophenol         mg/kg           2,4-Dimitrophenol         mg/kg           2,4-Dimitrophenol         mg/kg           2,4-Dimitrophenol         mg/kg	,	2000-05-12	2000-05-26	2000-05-12	2000-05-26
Trans-1.4-Dochloro-2-Butene         mg/kg           Trichloroethene (TCE)         mg/kg           Vinyl acctate         mg/kg           Vinyl acctate         mg/kg           Vinyl chloride         mg/kg           1.2.4.5-Tetrachlorobenzene         mg/kg           1.2.4-Trichlorobenzene         mg/kg           1.3-Dichlorobenzene         mg/kg           1.3-Dichlorobenzene         mg/kg           1.3-Dichlorobenzene         mg/kg           1.3-Dichlorobenzene         mg/kg           1.3-Dichlorobenzene         mg/kg           1.4-Dudorobenzene         mg/kg           1.4-Duhlorobenzene         mg/kg           1.4-Duhlorobenzene         mg/kg           2.2-Oxybis(1-chlorophenol         mg/kg           2.3-A-Cartichlorophenol         mg/kg           2.4-Dirichlorophenol         mg/kg           2.4-Dirichlorophenol         mg/kg           2.4-Diritrophenol         mg/kg           2.4-Diritrophenol         mg/kg           2.5-Diritrophenol         mg/kg           2.6-Diritrophenol         mg/kg           2.7-Oxybis(1-chlorophenol         mg/kg           2.4-Diritrophenol         mg/kg           2.5-Diritrophenol         mg/kg<	mg/kg	NA	0.004 U	NA	0.004 11
Trichloroethene (TCE)   mg/kg	mg/kg	NA	0 004 U	NA	0.004 U
Trichlorofluoromethane         mg/kg           Vinyl acetate         mg/kg           Vinyl chloride         mg/kg           1.2.4.5-Tetrachlorobenzene         mg/kg           1.2.4-Trichlorobenzene         mg/kg           1.3.5-Trinitrobenzene         mg/kg           1.3.5-Trinitrobenzene         mg/kg           1.3.5-Dichlorobenzene         mg/kg           1.3.5-Dichlorobenzene         mg/kg           1.4.5-Dintrobenzene         mg/kg           1.4.5-Dichlorobenzene         mg/kg           1.4.5-Dichlorobenzene         mg/kg           1.4.5-Dichlorobenzene         mg/kg           1.4.7-Naphthylamine         mg/kg           2.2Oxybis(1-chlorophenol         mg/kg           2.4.5-Trichlorophenol         mg/kg           2.4.5-Trichlorophenol         mg/kg           2.4.5-Dimitrophenol         mg/kg           2.4.5-Dimitrophenol         mg/kg           2.4-Dimitrophenol         mg/kg           2.5-Dimitrophenol         mg/kg           2.6-Dimitrophenol         mg/kg           2.6-Dimitrophenol         mg/kg           2.6-Dimitrophenol         mg/kg           2.7-Morophenol         mg/kg           2.7-Methylinaphthalene	mg/kg	NA	0.004 U	AZ	0.004 F
Vinyl acctate         mg/kg           Vinyl chlorde         mg/kg           1.2,4,5-Tetrachlorobenzene         mg/kg           1.2,4-Trichlorobenzene         mg/kg           1.2-Dichlorobenzene         mg/kg           1.3-Dichlorobenzene         mg/kg           1.3-Dichlorobenzene         mg/kg           1.3-Dichlorobenzene         mg/kg           1.4-Dochlorobenzene         mg/kg           1.4-Dochlorobenzene         mg/kg           1.4-Dochlorobenzene         mg/kg           1.4-Dochlorobenzene         mg/kg           2.2-Oxybis(1-chlorophenol         mg/kg           2.2-Oxybis(1-chlorophenol         mg/kg           2.4-G-Trichlorophenol         mg/kg           2.4-G-Trichlorophenol         mg/kg           2.4-Dimitrophenol         mg/kg           2.4-Dimitrophenol         mg/kg           2.4-Dimitrophenol         mg/kg           2.4-Dimitrophenol         mg/kg           2.5-Dimitrophenol         mg/kg           2.6-Dimitrophenol         mg/kg           2-Chorophenol         mg/kg           2-Chlorophenol         mg/kg           2-Chlorophenol         mg/kg           2-Methylaphthalene         mg/kg      <	mg/kg	NA	0.003 U	NA	0.004 U
Vinyl chloride         mg/kg           1,2,4,5-Tetrachlorobenzene         mg/kg           1,2,4-Trichlorobenzene         mg/kg           1,2-Dichlorobenzene         mg/kg           1,3-Dichlorobenzene         mg/kg           1,3-Dichlorobenzene         mg/kg           1,4-Dichlorobenzene         mg/kg           1,4-Dichlorobenzene         mg/kg           1,4-Dichlorobenzene         mg/kg           1,4-Dichlorobenzene         mg/kg           1,4-Dichlorobenzene         mg/kg           2,2-Oxybis(1-chlorophenol         mg/kg           2,4-G-Trichlorophenol         mg/kg           2,4-Dichlorophenol         mg/kg           2,4-Dintrophenol         mg/kg           2,4-Dintrophenol         mg/kg           2,4-Dintrophenol         mg/kg           2,4-Dintrophenol         mg/kg           2,5-Dichlorophenol         mg/kg           2,6-Dintrophenol         mg/kg           2,6-Dintrophenol         mg/kg           2,6-Dintrophenol         mg/kg           2-Aminoraphithalene         mg/kg           2-Chlorophenol         mg/kg           2-Chlorophenol         mg/kg           2-Methylphenol (o-Cresol)         mg/kg	mg/kg	NA	0.004 U	AN	0 004 U
1,2,4,5-Tetrachlorobenzene         mg/kg           1,2,4-Trichlorobenzene         mg/kg           1,2-Dichlorobenzene         mg/kg           1,3-Dichlorobenzene         mg/kg           1,3-Dichlorobenzene         mg/kg           1,3-Dinntrobenzene         mg/kg           1,4-Dichlorobenzene         mg/kg           1,4-Dichlorobenzene         mg/kg           1,4-Dichlorobenzene         mg/kg           1,4-Dichlorophenol         mg/kg           2,2'-Oxybis(1-chlorophenol)         mg/kg           2,3,4-G-Tetrachlorophenol         mg/kg           2,4-Dichlorophenol         mg/kg           2,4-Dimtrophenol         mg/kg           2,4-Dimtrophenol         mg/kg           2,4-Dimtrophenol         mg/kg           2,4-Dimtrophenol         mg/kg           2,5-Dichlorophenol         mg/kg           2,6-Dichlorophenol         mg/kg           2,6-Dichlorophenol         mg/kg           2-A-Dimtrophenol         mg/kg           2-A-Dimtrophenol         mg/kg           2-A-Dimtrophenol         mg/kg           2-A-Dimtrophenol         mg/kg           2-Chlorophenol         mg/kg           2-Chlorophenol         mg/kg <t< td=""><td>mg/kg</td><td>NA</td><td>0 004 U</td><td>NA</td><td>0 004 U</td></t<>	mg/kg	NA	0 004 U	NA	0 004 U
1,2,4-Trichlorobenzene         mg/kg           1,2-Dichlorobenzene         mg/kg           1,3-Dichlorobenzene         mg/kg           1,3-Dichlorobenzene         mg/kg           1,3-Dinntrobenzene         mg/kg           1,4-Dichlorobenzene         mg/kg           1,4-Dichlorobenzene         mg/kg           1,4-Dichlorobenzene         mg/kg           1,4-Dichlorophenol         mg/kg           2,2-Oxybis(1-chlorophenol         mg/kg           2,3,4,6-Tertachlorophenol         mg/kg           2,4-5-Trichlorophenol         mg/kg           2,4-Dimethylphenol         mg/kg           2,4-Dimitrophenol         mg/kg           2,4-Dimitrophenol         mg/kg           2,4-Dimitrophenol         mg/kg           2,6-Dichlorophenol         mg/kg           2,6-Dimitrotoluene         mg/kg           2-Choronaphthalene         mg/kg           2-Chlorophenol         mg/kg <td< td=""><td>mg/kg</td><td>0.39 U</td><td>NA</td><td>0.38 U</td><td>NA</td></td<>	mg/kg	0.39 U	NA	0.38 U	NA
1,2-Dichlorobenzene         mg/kg           1,3-Dichlorobenzene         mg/kg           1,3-Dichlorobenzene         mg/kg           1,4-Dioxane (p-Dioxane)         mg/kg           2,2-Oxybis(1-chlorophenol         mg/kg           2,3,4,6-Tetrachlorophenol         mg/kg           2,4-5-Trichlorophenol         mg/kg           2,4-5-Trichlorophenol         mg/kg           2,4-Dimitrophenol         mg/kg           2,4-Dimitrophenol         mg/kg           2,6-Dichlorophenol         mg/kg           2-C-Dinitrotoluene         mg/kg           2-G-Dichlorophenol         mg/kg           2-G-Dinitrotoluene         mg/kg           2-G-Dinitrotoluene         mg/kg           2-G-Dinitrotoluene         mg/kg           2-A-Dimitrotoluene         mg/kg           2-A-Dimitrotoluene         mg/kg           2-A-Dimitrotoluene         mg/kg           2-A-Dimitrotoluene         mg/kg           2-A-Dimitrotoluene <td>mg/kg</td> <td>0.39 U</td> <td>NA</td> <td>0 38 U</td> <td>NA</td>	mg/kg	0.39 U	NA	0 38 U	NA
1,3,5-Trinutrobenzene         mg/kg           1,3-Dichlorobenzene         mg/kg           1,4-Diotzane (p-Dioxane)         mg/kg           1,4-Dioxane (p-Dioxane)         mg/kg           2,2'-Oxybis(1-chlorophenol         mg/kg           2,2'-Oxybis(1-chlorophenol         mg/kg           2,4-5-Trichlorophenol         mg/kg           2,4-5-Trichlorophenol         mg/kg           2,4-Dimethylphenol         mg/kg           2,4-Dimethylphenol         mg/kg           2,4-Dimitrotoluene         mg/kg           2,6-Dimitrotoluene         mg/kg           2,6-Dimitrotoluene         mg/kg           2,6-Dimitrotoluene         mg/kg           2,6-Dimitrotoluene         mg/kg           2,6-Dimitrotoluene         mg/kg           2-Aminoraphthalene (beta-Naphthylamine)         mg/kg           2-Aminoraphthalene         mg/kg           2-Chlorophenol         mg/kg           2-Methylnaphthalene         mg/kg           2-Methylphenol (o-Cresol)         mg/kg	mg/kg	0.39 U	NA	0.38 U	NA
1,3-Dichlorobenzene         mg/kg           1,3-Dinntrobenzene         mg/kg           1,4-Dichlorobenzene         mg/kg           1,4-Dioxane (p-Dioxane)         mg/kg           1,4-Dioxane (p-Dioxane)         mg/kg           1,4-Naphthylamine         mg/kg           2,2'-Oxybis(1-chlorophenol         mg/kg           2,3,4,6-Tetrachlorophenol         mg/kg           2,4-5-Trichlorophenol         mg/kg           2,4-5-Trichlorophenol         mg/kg           2,4-Dimtrophenol         mg/kg           2,4-Dimtrophenol         mg/kg           2,4-Dimtrophenol         mg/kg           2,6-Dichlorophenol         mg/kg           2,6-Dintrotoluene         mg/kg           2,6-Dintrotoluene         mg/kg           2-Acetylaminofluorene         mg/kg           2-Acetylaminofluorene         mg/kg           2-Acetylaminofluorene         mg/kg           2-Chloronaphthalene         mg/kg           2-Chlorophenol         mg/kg           2-Methylnaphthalene         mg/kg           2-Methylnaphthalene         mg/kg           2-Methylnaphthalene         mg/kg           2-Methylphenol (o-Cresol)         mg/kg           2-Methylphenol (o-Keta-Naphthylan	mg/kg	1.6 U	NA	1.5 U	NA
1,3-Dimitrobenzene         mg/kg           1,4-Dichlorobenzene         mg/kg           1,4-Dioxane (p-Dioxane)         mg/kg           1,4-Naphthylamine         mg/kg           1,4-Naphthylamine         mg/kg           2,2'-Oxybis(1-chlorophenol         mg/kg           2,3,4,6-Tetrachlorophenol         mg/kg           2,4-5-Trichlorophenol         mg/kg           2,4-Dimitrophenol         mg/kg           2,4-Dimitrophenol         mg/kg           2,4-Dimitrophenol         mg/kg           2,6-Dichlorophenol         mg/kg           2,6-Dinitrophenol         mg/kg           2,6-Dinitrophenol         mg/kg           2-Acetylaminofluorene         mg/kg           2-Acetylaminofluorene         mg/kg           2-Amunonaphthalene (beta-Naphthylamine)         mg/kg           2-Chlorophenol         mg/kg           2-Chlorophenol         mg/kg           2-Chlorophenol         mg/kg           2-Chlorophenol         mg/kg           2-Methylnaphthalene         mg/kg           2-Methylnaphthalene         mg/kg           2-Methylnaphthalene         mg/kg           2-Methylphenol (o-Cresol)         mg/kg           2-Methylphenol (o-Kresol)	mg/kg	0.39 U	ΨN	0.38 U	NA
1.4-Dichlorobenzene         mg/kg           1.4-Dioxane (p-Dioxane)         mg/kg           1.4-Naphthoquinone         mg/kg           1.4-Naphthylamine         mg/kg           2.2'-Oxybis(1-chlorophenol         mg/kg           2.3,4,6-Terrachlorophenol         mg/kg           2.4.5-Trichlorophenol         mg/kg           2.4-Dichlorophenol         mg/kg           2.4-Dinitrophenol         mg/kg           2.4-Dinitrophenol         mg/kg           2.4-Dinitrophenol         mg/kg           2.4-Dinitrophenol         mg/kg           2.4-Dinitrophenol         mg/kg           2.5-Dinitrophenol         mg/kg           2.6-Dinitrophenol         mg/kg           2-Acetylaminofluorene         mg/kg           2-Acetylaminofluorene         mg/kg           2-Aminonaphthalene         beta-Naphthylamine           2-Chloronaphthalene         mg/kg           2-Chlorophenol         mg/kg           2-Methylnaphthalene         mg/kg           2-Methylnaphthalene         mg/kg           2-Methylnaphthalene         mg/kg           2-Methylphenol (o-Cresol)         mg/kg           2-Methylphenol (o-Kresol)         mg/kg           3-Methylphenol (o-Kresol	mg/kg	0.79 U	VN	0.76 U	NA
1.4-Dioxane (p-Dioxane)         mg/kg           1.4-Naphthoquinone         mg/kg           1-Naphthylamine         mg/kg           2.2'-Oxybs(1-chlorophenol         mg/kg           2.3,4,6-Tetrachlorophenol         mg/kg           2.4.5-Trichlorophenol         mg/kg           2.4-Dichlorophenol         mg/kg           2.4-Dimtrophenol         mg/kg           2.4-Dimtrophenol         mg/kg           2.4-Dimtrophenol         mg/kg           2.4-Dimtrophenol         mg/kg           2.4-Dimtrophenol         mg/kg           2.6-Dimtrophenol         mg/kg           2-Acetylaminofluorene         mg/kg           2-Acetylaminofluorene         mg/kg           2-Aminonaphthalene         mg/kg           2-Chlorophenol         mg/kg           2-Chlorophenol         mg/kg           2-Chlorophenol         mg/kg           2-Methylnaphthalene         mg/kg           2-Methylnaphthalene         mg/kg           2-Methylnaphthalene         mg/kg           2-Methylphenol (o-Cresol)         mg/kg           2-Methylphenol (o-Kresol)         mg/kg	mg/kg	0.39 U	NA	0 38 U	NA
1.4-Naphthoquinone         mg/kg           1-Naphthylamine         mg/kg           2,2'-Oxybis(1-chlorophenol         mg/kg           2,3,4,6-Tetrachlorophenol         mg/kg           2,4,5-Trichlorophenol         mg/kg           2,4-Dichlorophenol         mg/kg           2,4-Dintrophenol         mg/kg           2,4-Dintrophenol         mg/kg           2,4-Dintrophenol         mg/kg           2,4-Dintrophenol         mg/kg           2,6-Dintrotoluene         mg/kg           2,6-Dintrotoluene         mg/kg           2,6-Dintrotoluene         mg/kg           2-Acetylaminofluorene         mg/kg           2-Acetylaminofluorene         mg/kg           2-Chloronaphthalene         mg/kg           2-Chlorophenol         mg/kg           2-Chlorophenol         mg/kg           2-Chlorophenol         mg/kg           2-Methylnaphthalene         mg/kg           2-Methylnaphthalene         mg/kg           2-Methylphenol (o-Cresol)         mg/kg           2-Nitroanline         mg/kg	mg/kg	1.6 U	VN	1.5 U	NA
1-Naphthylamine         mg/kg           2,2'-Oxybis(1-chlorophenol         mg/kg           2,3,4,6-Tetrachlorophenol         mg/kg           2,4,5-Trichlorophenol         mg/kg           2,4-Dichlorophenol         mg/kg           2,4-Dichlorophenol         mg/kg           2,4-Dinitrophenol         mg/kg           2,4-Dinitrophenol         mg/kg           2,4-Dinitrophenol         mg/kg           2,6-Dinitrophenol         mg/kg           2,6-Dinitrophenol         mg/kg           2-Acetylaminofluorene         mg/kg           2-Acetylaminofluorene         mg/kg           2-Acetylaminofluorene         mg/kg           2-Chlorophenol         mg/kg           2-Chlorophenol         mg/kg           2-Chlorophenol         mg/kg           2-Chlorophenol         mg/kg           2-Methylnaphthalene         mg/kg           2-Methylnaphthalene         mg/kg           2-Methylphenol (o-Cresol)         mg/kg           2-Nitroanline         mg/kg	mg/kg	2 R	VN	1 9 R	NA
2,2,7-Oxybis(1-chloropropane)         mg/kg           2,3,4,6-Tetrachlorophenol         mg/kg           2,4,5-Trichlorophenol         mg/kg           2,4-6-Trichlorophenol         mg/kg           2,4-Dimethylphenol         mg/kg           2,4-Dimtrophenol         mg/kg           2,4-Dimtrophenol         mg/kg           2,6-Dimtrotoluene         mg/kg           2,6-Dimtrotoluene         mg/kg           2,6-Dimtrotoluene         mg/kg           2-Acetylaminofluorene         mg/kg           2-Acetylaminofluorene         mg/kg           2-Acetylaminofluorene         mg/kg           2-Chlorophthalene         mg/kg           2-Chlorophenol         mg/kg           2-Chlorophenol (o-Cresol)         mg/kg           2-Methylphenol (o-Cresol)         mg/kg           2-Methylphenol (o-Cresol)         mg/kg	mg/kg	0.79 U	ΥN	0.76 U	NA
2,3,4,6-Tetrachlorophenol         mg/kg           2,4,5-Trichlorophenol         mg/kg           2,4,6-Trichlorophenol         mg/kg           2,4-Dimethylphenol         mg/kg           2,4-Dimitrophenol         mg/kg           2,4-Dimitrophenol         mg/kg           2,4-Dimitrotoluene         mg/kg           2,6-Dichlorophenol         mg/kg           2,6-Dimitrotoluene         mg/kg           2-Ammonaphthalene (beta-Naphthylamine)         mg/kg           2-Acetylaminofluorene         mg/kg           2-Chlorophenol         mg/kg           2-Chlorophenol         mg/kg           2-Methylnaphthalene         mg/kg           2-Methylnaphthalene         mg/kg           2-Methylphenol (o-Cresol)         mg/kg           2-Nitroanline         mg/kg	mg/kg	0.39 U	W	0.38 U	NA
2.4.5-Trichlorophenol         mg/kg           2.4.6-Trichlorophenol         mg/kg           2.4-Dichlorophenol         mg/kg           2.4-Dimitrophenol         mg/kg           2.4-Dimitrophenol         mg/kg           2.6-Dichlorophenol         mg/kg           2.6-Dichlorophenol         mg/kg           2.6-Dinitrotoluene         mg/kg           2.6-Dinitrotoluene         mg/kg           2-Aminonaphthalene (beta-Naphthylamine)         mg/kg           2-Chlorophenol         mg/kg           2-Chlorophenol         mg/kg           2-Methylnaphthalene         mg/kg           2-Methylphenol (o-Cresol)         mg/kg           2-Methylphenol (o-Cresol)         mg/kg	mg/kg	0.39 U	NA	0.38 U	NA
2.4.6-Trichlorophenol         mg/kg           2.4-Dichlorophenol         mg/kg           2.4-Dimtrophenol         mg/kg           2.4-Dimtrophenol         mg/kg           2.4-Dimtrophenol         mg/kg           2.6-Dichlorophenol         mg/kg           2.6-Dinitrotoluene         mg/kg           2.6-Dimitrotoluene         mg/kg           2-Aminonaphthalene (beta-Naphthylamine)         mg/kg           2-Chlorophenol         mg/kg           2-Chlorophenol         mg/kg           2-Methylnaphthalene         mg/kg           2-Methylphenol (o-Cresol)         mg/kg           2-Methylphenol (o-Cresol)         mg/kg	mg/kg	2 U	VN	U 6.1	NA
2.4-Dichlorophenol         mg/kg           2.4-Dimethylphenol         mg/kg           2.4-Dimitrophenol         mg/kg           2.4-Dimitrophenol         mg/kg           2.6-Dichlorophenol         mg/kg           2.6-Dichlorophenol         mg/kg           2-Acctylaminofluorene         mg/kg           2-Aminonaphthalene         mg/kg           2-Chlorophenol         mg/kg           2-Chlorophenol         mg/kg           2-Methylnaphthalene         mg/kg           2-Methylphenol (o-Cresol)         mg/kg           2-Methylphenol (o-Cresol)         mg/kg           2-Nitroanline         mg/kg	mg/kg	0.39 U	WA	0.38 U	NA
2.4-Dimethylphenol         mg/kg           2.4-Dinitrophenol         mg/kg           2.4-Dimitrotoluene         mg/kg           2.6-Dichlorophenol         mg/kg           2.6-Dinitrotoluene         mg/kg           2-Acetylaminofluorene         mg/kg           2-Aminoraphthalene (beta-Naphthylamine)         mg/kg           2-Chlorophenol         mg/kg           2-Chlorophenol         mg/kg           2-Methylnaphthalene         mg/kg           2-Methylphenol (o-Cresol)         mg/kg           2-Methylphenol (o-Cresol)         mg/kg	mg/kg	0.39 U	VN	0.38 U	NA
2.4-Dinitrophenol         mg/kg           2,4-Dinitrotoluene         mg/kg           2,6-Dichlorophenol         mg/kg           2,6-Dinitrotoluene         mg/kg           2-Acetylaminofluorene         mg/kg           2-Aminonaphthalene (beta-Naphthylamine)         mg/kg           2-Chlorophenol         mg/kg           2-Chlorophenol         mg/kg           2-Methylnaphthalene         mg/kg           2-Methylnaphthalene         mg/kg           2-Methylphenol (o-Cresol)         mg/kg           2-Nitroanline         mg/kg	mg/kg	0.39 U	VN	0.38 U	NA
2,4-Dinitrotoluene         mg/kg           2,6-Dichlorophenol         mg/kg           2,6-Dimitrotoluene         mg/kg           2-Acetylaminofluorene         mg/kg           2-Aminonaphthalene (beta-Naphthylamine)         mg/kg           2-Chlorophenol         mg/kg           2-Chlorophenol         mg/kg           2-Methylnaphthalene         mg/kg           2-Methylnaphthalene         mg/kg           2-Methylphenol (o-Cresol)         mg/kg           2-Nitroanline         mg/kg	mg/kg	2 R	NA	1.9 R	NA
2,0-Dichlorophenol         mg/kg           2,6-Dinitrotoluene         mg/kg           2-Acetylaminofluorene         mg/kg           2-Aminoraphthalene (beta-Naphthylamine)         mg/kg           2-Chloronaphthalene         mg/kg           2-Chlorophenol         mg/kg           2-Methylnaphthalene         mg/kg           2-Methylphenol (o-Cresol)         mg/kg           2-Nitroanline         mg/kg	mg/kg	0.39 U	NA	0 38 U	NA
2.0-Dinitrosoluene         mg/kg           2-Acetylaminofluorene         mg/kg           2-Aminonaphthalene (beta-Naphthylamine)         mg/kg           2-Chlorophenol         mg/kg           2-Chlorophenol         mg/kg           2-Methylnaphthalene         mg/kg           2-Methylphenol (o-Cresol)         mg/kg           2-Nitroanline         mg/kg	mg/kg	0.39 U	NA	0 38 U	NA
2-Acetylaminofluorene       mg/kg         2-Aminonaphthalene (beta-Naphthylamine)       mg/kg         2-Chlorophenol       mg/kg         2-Methylnaphthalene       mg/kg         2-Methylnaphthalene       mg/kg         2-Methylphenol (o-Cresol)       mg/kg         2-Nitroanline       mg/kg	mg/kg	0.39 U	NA	0 38 U	NA
2-Aminonaphthalene     mg/kg       2-Chloronaphthalene     mg/kg       2-Chlorophenol     mg/kg       2-Methylnaphthalene     mg/kg       2-Methylphenol (o-Cresol)     mg/kg       2-Nitroanline     mg/kg		0.79 U	NA	0.76 U	NA
2-Chloronaphthalenemg/kg2-Chlorophenolmg/kg2-Methylnaphthalenemg/kg2-Methylphenol (o-Cresol)mg/kg2-Nitroanlinemg/kg		0.79 U	NA	0.76 U	AZ
2-Chlorophenolmg/kg2-Methylnaphthalenemg/kg2-Methylphenol (o-Cresol)mg/kg2-Nitroanlinemg/kg	mg/kg	0.39 U	NA	0.38 U	NA
2-Methylpaphthalene     2-Methylphenol (o-Cresol) mg/kg     2-Nitroaniline mg/kg	mg/kg	0.39 U	NA	0.38 U	, VZ
2-Mitroanline mg/kg mg/kg	mg/kg	0.39 U	NA	0.38 U	NA
2-Nitroaniline mg/kg	mg/kg	0 39 U	NA	0.38 U	NA
	mg/kg	2 U	NA	1.9 U	NA
	mg/kg	0.39 U	NA	0.38 U	NA

Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

			BHGLAOC1901 00 ft	BHGLAOC1901 00 ft	BHGLAOC1901 05 ft	BHGLAOC1901 05 ft
Method	Analyte	Unit	2000-05-12	2000-05-26	2000-05-12	2000-05-26
SW8270C	2-Picoline (alpha-Picoline)	mg/kg	0.39 U	NA	0.38 U	NA
SW8270C	[3,3'-Dichlorobenzidine	mg/kg	0 79 U	NA	Ω 92.0	NA
SW8270C	3,3'-Dimethylbenzıdıne	mg/kg	2 U	NA	U 6.1	AN
SW8270C		mg/kg	0 39 U	NA	0.38 U	NA
SW8270C	3-Nitroaniline	mg/kg	2 U	NA	1.9 U	AN
SW8270C	SW8270C 4,6-Dintro-2-methylphenol	mg/kg	2 U	NA	U 6.1	NA
SW8270C	SW8270C 4-Ammobiphenyl (4-Biphenylamine)	mg/kg	0.79 U	NA	Ω 92'0	AN
SW8270C	4-Bromophenyl phenyl ether	mg/kg	0.39 U	NA	Ω 8 ε 0	NA
SW8270C	4-Chloro-3-methylphenol	mg/kg	0.39 U	NA	0.38 U	NA
SW8270C	4-Chloroaniline	mg/kg	0.39 U	NA	0.38 U	NA
SW8270C	4-Chlorophenyl phenyl ether	mg/kg	0.39 U	NA	0.38 U	VΑ
SW8270C	4-Methylphenol (P-Cresol)	mg/kg	NA	NA	ΥN	ΝΑ
SW8270C	4-Nitroamline	mg/kg	2 U	NA	υ 6:1	NA
SW8270C	4-Nitrophenol	mg/kg	2 U	NA	1.9 U	NA
SW8270C	4-N ttroquinoline-1-oxide	mg/kg	2 R	NA	1.9 R	NA
SW8270C	5-Nitro-o-toluidine	mg/kg	0.79 U	NA	0.76 U	NA
SW8270C	7,12-Dimethylbenzo(a)anthracene	mg/kg	0.79 U	NA	0.76 U	NA
SW8270C	Acenaphthene	mg/kg	0.39 U	NA	0 38 U	NA
SW8270C	Acenaphthylene	mg/kg	0 39 U	NA	0 38 U	NA
SW8270C	Acetophenone	mg/kg	0 39 U	NA	0.38 U	NA
SW8270C	SW8270C  alpha, alpha-Dimethylphenethylamine	mg/kg	2 U	NA	U 6.1	NA
SW8270C	Aniline (Phenylamine, Aminobenzene)	mg/kg	0.39 U	NA	0.38 U	NA
SW8270C	Anthracene	mg/kg	0.39 U	NA	0.38 U	NA
SW8270C	Aramite (total)	mg/kg	0.79 U	NA	0 76 U	NA
SW8270C	Benzo(a)anthracene	mg/kg	0.39 U	NA	0 38 U	NA
SW8270C	Benzo(a)pyrene	mg/kg	0 39 U	NA	0.38 U	NA
SW8270C	Benzo(b)fluoranthene	mg/kg	0 39 U	NA	0.38 U	NA
SW8270C	Benzo(g,h,i)perylene	mg/kg	0 39 U	NA	0.38 U	NA
SW8270C	Benzo(k)fluoranthene	mg/kg	0.39 U	NA	0.38 U	NA
SW8270C	Benzoic acid	mg/kg	2 U	NA	U 6.1	NA
SW8270C	Benzyl alcohol	mg/kg	0.39 U	NA	0.38 U	NA
SW8270C		mg/kg	0 28 F	NA	0.38 U	NA
SW8270C	bis(2-Chloroethoxy)methane	mg/kg	0 39 U	NA	0 38 U	NA



Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

	* *		BHGLAOC1901 00 ft	BHGLAOC1901 00 ft	RHGLAOCIONI 05 P	RHCI AOCTON 05 8
Method	Analyte	Cuit	2000-05-12	2000-05-26	2000-05-12	2000.05.26
SW8270C	bis(2-Chloroethyl)ether (2-Chloroethyl ether)	mg/kg	0.39 U	NA	0,38 U	AN AN
SW8270C	bis(2-Ethylhexyl)phthalate	mg/kg	0.39 U	NA	0.38 U	AN
Sw82/0C	Chlorobenzilate	mg/kg	0.39 U	NA	0.38 U	NA
SW8270C	Chrysene	mg/kg	0.39 U	NA	0.38 U	NA
SW82/0C	Cresols, m & p	mg/kg	0.39 U	NA	0.38 U	NA
SW82/0C	Dialiate (total of cis and trans isomers)	mg/kg	0.39 U	NA	0.38 U	NA
SW8270C	Dibenz(a,h)anthracene	mg/kg	0.39 U	NA	0.38 U	NA
SW8270C	Dibenzofuran	mg/kg	0.39 U	NA	0.38 U	N.
SW8270C	Diethyl phthalate	mg/kg	0 39 U	AN	0.38 U	ΨZ
SW8270C	Dimethyl phthalate	mg/kg	0.39 U	NA	0 38 U	NA
SW82/0C	Di-n-butyl phthalate	mg/kg	0.39 U	VN	0.38 U	ĄN
	Di-n-octyl phthalate	mg/kg	0.39 U	AN	0.38 U	Ϋ́Z
	Dinoseb	mg/kg	0.79 U	AN	0.76 U	NA
SW82/0C	Diphenylamine	mg/kg	0.39 U	ΥN	0.38 U	ΝΑ
SW82/0C	Ethyl methanesulfonate	mg/kg	0.39 U	VΝ	0 38 U	ŊŊ
SW82/0C	Fluoranthene	mg/kg	0.39 U	NA VA	0.38 U	AN
SW8270C	Fluorene	mg/kg	0.39 U	NA	0.38 U	NA
	Hexachlorobenzene	mg/kg	0.39 U	NA	0.38 U	NA
$\neg$	Hexachlorobutadiene	mg/kg	0 39 U	VN	0 38 U	Ϋ́Z
	Hexachlorocyclopentadiene	mg/kg	0 39 U	NA	0 38 U	NA
SW8270C	Hexachloroethane	mg/kg	0.39 R	NA	0.38 R	NA
SW82/0C	SW8Z/UC Hexachlorophene	mg/kg	5.9 R	NA	5.7 R	¥Z
SW8270C	SW8270C Hexachloropropene	mg/kg	2 U	NA	19 U	NA
SW82/0C	SW82/UC Indeno(1,2,3-c,d)pyrene	mg/kg	0 39 U	NA	0.38 U	NA
SW82/0C	SW8Z/UC Isophorone	mg/kg	0 39 U	NA	0.38 U	AZ
SW82/UC Isosairole	Isosarrole	mg/kg	0.39 U	NA	0 38 U	AZ
SW82/0C	SW82/0C Methapyrilene	mg/kg	2 U	NA	1.9 U	NA
SW82/0C	SW8Z/UC Methyl methanesultonate	mg/kg	0.79 U	NA	0.76 U	AZ
	Naphthalene	mg/kg	0 39 U	NA	0.38 U	ĄZ
-	Nitrobenzene	mg/kg	0 39 U	NA	0.38 U	¥Z
	N-Nitrosodiethylamine	mg/kg	0 6L 0	NA	0.76 U	NA
-	N-Nitrosodimethylamine	mg/kg	0.39 U	NA	0 38 U	NA
T	N-Nitrosodi-n-butylamine	mg/kg	0.39 U	NA	0.38 U	NA
3W82/UC	N-Mirosodi-n-propylamine	mg/kg	0.39 U	NA	0 38 U	NA

Table E.1 Comprehensive Soil Results AOC 19 NAS Fort Worth JRB, Texas

	N. A.	•	BHGLAOC1901 00 ft	BHGLAOC1901 00 ft	BHGLAOC1901 05 ft	BHGLAOC1901 05 ft
Method	Analyte	Unit	2000-05-12	2000-05-26	2000-05-12	2000-05-26
SW8270C	SW8270C N-Nitrosodiphenylamine	mg/kg	0.39 U	NA	0.38 U	NA
SW8270C	SW8270C N-Nitrosomethylethylamine	mg/kg	0.79 U	NA	U 97.0	NA
SW8270C	SW8270C N-Nitrosomorpholine	mg/kg	0.79 U	NA	0.76 U	NA
SW8270C	SW8270C N-Nitrosopiperidine	mg/kg	0.39 U	W	O 38 O	NA
SW8270C	SW8270C N-Ntrosopyrrolidine	mg/kg	2 U	NA	υ 6.1	NA
SW8270C	SW8270C o-Toluidine	mg/kg	O 39 O	NA NA	O 38 O	NA
SW8270C	SW8270C p-Dimethylaminoazobenzene	mg/kg	0.79 U	WA	0.76 U	NA
SW8270C	SW8270C Pentachlorobenzene	mg/kg	0.39 U	NA	0.38 U	NA
SW8270C	SW8270C Pentachloronitrobenzene	mg/kg	0.39 U	NA	0.38 U	NA
SW8270C	SW8270C Pentachlorophenol	mg/kg	2 U	W	N 6 I	NA
SW8270C	SW8270C Phenacetin	mg/kg	0.79 U	NA	0.76 U	NA
SW8270C	SW8270C Phenanthrene	mg/kg	0.39 U	VN	0.38 U	NA
SW8270C Phenol	Phenol	mg/kg	0 39 U	NA	0 38 U	NA
SW8270C	SW8270C p-Phenylenediamine	mg/kg	1.6 U	NA	1.5 U	NA
SW8270C	SW8270C Pronamide	mg/kg	0 62 O	NA	Ω 92 0	NA
SW8270C Pyrene	Pyrene	mg/kg	0.39 U	NA	0 38 N	NA
SW8270C Pyridine	Pyridine	mg/kg	0.79 U	VN	0.76 U	NA
SW8270C Safrole	Safrole	mg/kg	0.39 U	NA	0.38 U	NA

Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

NA N			·	BHGLAOC1901 10 ft	BHGLAOC1901 10 ft	BHGLAOC1902 00 ff	RHGLAOCIGO 05 B
Ansenic         mg/kg         67         NA           Barjuum         mg/kg         33.3 F         NA           Barjuum         mg/kg         0.13 F         NA           Cadmuum         mg/kg         0.13 F         NA           Cadmum         mg/kg         2.9 F         NA           Copper         mg/kg         4.2 F         NA           Lob         mg/kg         4.2 F         NA           Land         mg/kg         4.2 F         NA           Antumony         mg/kg         0.04 U         NA           Antumony         mg/kg         0.04 U         NA           Antumony         mg/kg         0.04 U         NA           Mercury         mg/kg         0.04 U         NA           Mercury         mg/kg         0.04 U         0.02 U           1.1.1.2.Tetrachlorocethane         m	Method	Analyte	Unit	2000-05-12	2000-05-26	2000-05-15	2000-05-15
Barjum         mg/kg         33.3 F         NA           Bezylium         mg/kg         0.31 U         NA           Cadnum         mg/kg         7.4 F         NA           Cobalt         mg/kg         7.4 F         NA           Copper         mg/kg         7.2 F         NA           Nicel         mg/kg         7.6 F         NA           Nicel         ng/kg         2.2 F         NA           Antmony         mg/kg         1.7 F         NA           Antmony         mg/kg         0.04 U         NA           Antmony         mg/kg         0.17 UJ         NA           Janethorochame         mg/kg         0.17 UJ         NA         0.002 U           I.I.J.2.Tetrachlorochame         mg/kg         NA         0.002 U         1.1.1.2.2.4           I.I.J.2.Tetrachlorochame         mg/kg         NA         0.002 U           I.I.J.Dichlorochame         mg/kg <td>SW6010B</td> <td>Arsenic</td> <td>mg/kg</td> <td>29</td> <td>NA</td> <td>4,9</td> <td>5.5</td>	SW6010B	Arsenic	mg/kg	29	NA	4,9	5.5
Beryllium         mg/kg         0 31 U         NA           Cadnium         mg/kg         7.4 F         NA           Cobatt         mg/kg         2.9 F         NA           Cobatt         mg/kg         4.2 F         NA           Noteler         mg/kg         1.6 F         NA           Nixel         mg/kg         1.6 F         NA           Nixel         mg/kg         1.6 F         NA           Antimony         mg/kg         1.3 D         NA           Lead         mg/kg         0.04 U         NA           Mercury         mg/kg         0.13 U         NA           Lead         mg/kg         0.13 U         NA           Line-Trachlorochlane         mg/kg         0.04 U         NA           Line-Trachlorochlane         mg/kg         NA         0.020 U           Line-Deforocedrane         mg/kg         NA		Barium	mg/kg	33.3 F	NA	75 J	62 J
Cadmunn         mg/kg         0.13 F         NA           Chronnum, total         mg/kg         7.4 F         NA           Choper         mg/kg         4.2 F         NA           Cobalt         mg/kg         4.2 F         NA           Coper         mg/kg         4.2 F         NA           Tin         mg/kg         7.6 F         NA           Antumony         mg/kg         9.8 F         NA           Lead         mg/kg         9.8 F         NA           Matumony         mg/kg         0.43 UJ         NA           Matumony         mg/kg         0.13 UJ         NA           Selenum         mg/kg         0.17 UJ         NA           Selenum         mg/kg         0.17 UJ         NA           Silver         ng/kg         0.13 UJ         NA           1.1.1.5-Tetrablorocthane         mg/kg<		Beryllıum	mg/kg	0 31 U	ΥN	1	0.35 J
Chromum, total         mg/kg         2.9 F         NA           Cobalt         Cobalt         NA         NA           Coper         Nickel         1.5 F         NA           Nickel         1.6 F         NA         NA           Vanadum         mg/kg         22.6 F         NA           Vanadum         mg/kg         22.6 F         NA           Antimony         mg/kg         0.43 U         NA           Antimony         mg/kg         0.44 U         NA           Mercury         mg/kg         0.17 U         NA           Mercury         mg/kg         0.13 U         NA           Mercury         mg/kg         0.17 U         NA           Mercury         mg/kg         0.17 U         NA           Maccury         mg/kg         0.17 U         NA           Maccury         mg/kg         0.86 UJ         NA           Macconcentrate         mg/kg         0.80 UJ         NA           Macconcentrate         mg/kg         NA         0.002 U           Macconcentrate         mg/kg         NA         0.002 U           Macconcentrate         mg/kg         NA         0.002 U		Cadmium	mg/kg	0.13 F	NA	0.24 F	0.26 F
Cobalt         mg/kg         2.9 F         NA           Copper         mg/kg         4.2 F         NA           Tin         mg/kg         1.6 F         NA           Zine         mg/kg         1.6 F         NA           Zine         mg/kg         22.6 F         NA           Antimony         mg/kg         0.04 U         NA           Antimony         mg/kg         0.04 U         NA           Antimony         mg/kg         0.04 U         NA           Mercury         mg/kg         0.04 U         NA           Selenum         mg/kg         0.04 U         NA           Silver         ng/kg         0.04 U         NA           1.1.1.2.Tetrachlorochane         mg/kg         0.86 U         NA           1.1.1.2.Trichlorochane         mg/kg         NA         0.002 U           1.1.1.2.Trichlorochane         mg/kg         NA         0.002 U           1.1.1.1.2.Trichlorochane         mg/kg         NA         0.002 U           1.1.1.1.2.Trichlorochane         mg/kg         NA         0.002 U           1.1.2.Dichlorochane         mg/kg         NA         0.002 U           1.2.Dichlorochane         mg/kg	SW6010B	Chromum, total	mg/kg	7.4 F	NA	20 3 J	10.5 J
Copper         mg/kg         4.2 F         NA           Nickel         ng/kg         7.6 F         NA           Vanadum         mg/kg         1.7 F         NA           Land         mg/kg         2.2 6 F         NA           Antimony         mg/kg         9.8 F         NA           Antimony         mg/kg         0.43 UJ         NA           Lead         mg/kg         0.17 UJ         NA           Selenum         mg/kg         0.17 UJ         NA           Silver         ng/kg         0.17 UJ         NA           Thalluum         mg/kg         0.17 UJ         NA           1.1.1.2-Tetrachloroethane         mg/kg         NA         0.002 U           1.1.1.7-Trichloroethane         mg/kg         NA         0.002 U           1.1.1.2-Tetrachloroethane         mg/kg         NA         0.002 U           1.1.2-Trichloroethane         mg/kg         NA         0.002 U           1.2-Dichloroethane	SW6010B	Cobalt	mg/kg	29F	NA	55F	3.9 F
Nickel         nigkg         7.6 F         NA           Tin         nigkg         1 F         NA           Vanadtum         nigkg         22.6 F         NA           Zinc         NA         NA         NA           Lead         nigkg         0.43 UJ         NA           Mercury         nigkg         0.04 U         NA           Selentum         nigkg         0.17 UJ         NA           Silver         nigkg         0.17 UJ         NA           Lil.1.2.Trachlorochane         nigkg         NA         0.002 U           1.1.1.2.Trachlorochane         nigkg         NA         0.002 U           1.1.2.Trachlorochane         nigkg         NA         0.002 U           1.1.1.2.Trachlorochane         nigkg         NA         0.002 U           1.1.1.2.Trachlorochane         nigkg         NA         0.002 U           1.1.1.2.Drichlorochane         nigkg         NA         0.002 U           1.1.2.Drichlorochane         nigkg         NA         0.002 U           1.2.Dubromo-thane         nigkg         NA         0.002 U           1.2.Dubromo-thane         nigkg         NA         0.002 U           2.Clator-1.Sulardene <td>SW6010B</td> <td>Copper</td> <td>mg/kg</td> <td>4.2 F</td> <td>NA</td> <td>10.5</td> <td>4.1 F</td>	SW6010B	Copper	mg/kg	4.2 F	NA	10.5	4.1 F
Tin         mgkg         1 F         NA           Vanaduum         mg/kg         22.6 F         NA           Antumony         mg/kg         0.43 UJ         NA           Lead         4.7         NA           Mercury         mg/kg         4.7         NA           Seleruum         mg/kg         0.04 U         NA           Sileruum         mg/kg         0.17 UJ         NA           Sileruum         mg/kg         0.86 UJ         NA           1.1.1.2-Tetrachloroethane         mg/kg         NA         0.002 U           1.1.2.2-Tetrachloroethane         mg/kg         NA         0.002 U           1.1.2-Trichloroethane         mg/kg         NA         0.002 U           1.1.2-Trichloroethane         mg/kg         NA         0.002 U           1.2-Dichloroethane         mg/kg         NA         0.002 U           1.2-Dichloroethane         mg/kg         NA         0.002 U           1.2-Dichloroethane<	SW6010B	Nickel	mg/kg	7.6 F	NA	13.2 J	7.9 F
Vanachum         mg/kg         22.6 F         NA           Zinc         mg/kg         9.8 F         NA           Anturnony         mg/kg         0.43 UJ         NA           Anturnony         mg/kg         0.47         NA           Mercury         mg/kg         0.04 U         NA           Selenum         mg/kg         0.17 UJ         NA           Silver         mg/kg         0.86 UJ         NA           Thallium         mg/kg         NA         0.002 U           11,1,2-Tertachlorocthane         mg/kg         NA         0.002 U           1,1,1-Trichlorocthane         mg/kg         NA         0.002 U           1,1,1-Dichlorocthane         mg/kg         NA         0.002 U           1,1-Dichlorocthane         mg/kg         NA         0.002 U           1,1-Dichlorocthane         mg/kg         NA         0.004 U           1,2-Dichlorocthane         mg/kg         NA         0.004 U           2-Chloro-1,3-b		Tin	mg/kg	1 F	NA	9.1 UJ	8 2 UJ
Line         mg/kg         98 F         NA           Antumony         mg/kg         0.43 UJ         NA           Antumony         mg/kg         0.43 UJ         NA           Learned         mg/kg         0.04 U         NA           Selentum         mg/kg         0.17 UJ         NA           Silver         mg/kg         0.17 UJ         NA           Thallium         mg/kg         NA         0.002 U           1,1,1,2 Tertachlorochtane         mg/kg         NA         0.002 U           1,1,2,2-Trachlorochtane         mg/kg         NA         0.002 U           1,1,2-Trachlorochtane         mg/kg         NA         0.002 U           1,2-Dichlorochtane         mg/kg         NA         0.004 U           1,2-Dichlorochtane         mg/kg         NA         0.002 U           1,2-Dichlorochtane         mg/kg         NA         0.002 U           1,2-Dichlorochtane         mg/kg         NA         0.002 U	SW6010B	Vanadium	mg/kg	22.6 F	NA	36.8 J	28.9 J
Antimony         mg/kg         0.43 UJ         NA           Lead         Mercury         NA         NA           Selectury         mg/kg         0.04 U         NA           Selectury         mg/kg         0.17 UJ         NA           Silver         mg/kg         0.17 UJ         NA           Thallium         mg/kg         0.86 UJ         NA           1.1.1.2-Tertachloroethane         mg/kg         NA         0.002 U           1.1.2-Trichloroethane         mg/kg         NA         0.002 U           1.1.2-Trichloroethane         mg/kg         NA         0.002 U           1.1.1-Trichloroethane         mg/kg         NA         0.002 U           1.1.1-Trichloroethane         mg/kg         NA         0.002 U           1.1.1-Trichloroethane         mg/kg         NA         0.004 U           1.1.1-Dichloroethane         mg/kg         NA         0.004 U           1.2-Dichloroethane         mg/kg         NA         0.002 U           1.2-Dichloroptopane         mg/kg         NA         0.002 U           1.2-Dichloroptopane         mg/kg         NA         0.002 U           1.2-Dichloroethane         mg/kg         NA         0.004 U     <	SW6010B	Zinc	mg/kg	98F	NA	36.2	13.5 F
Lead         mg/kg         4.7         NA           Mercury         mg/kg         0.04 U         NA           Selenuun         mg/kg         0.17 UJ         NA           Selenuun         mg/kg         0.17 UJ         NA           Silvenuun         mg/kg         0.60 UJ         NA           1.1.1.2-Tetrachloroethane         mg/kg         NA         0.002 U           1.1.2-Trichloroethane         mg/kg         NA         0.002 U           1.1.2-Trichloroethane         mg/kg         NA         0.002 U           1.1.1-Trichloroethane         mg/kg         NA         0.002 U           1.1.2-Trichloroethane         mg/kg         NA         0.002 U           1.1.2-Trichloroethane         mg/kg         NA         0.004 U           1.1.2-Trichloroptopane         mg/kg         NA         0.004 U           1.2-Dichloroptopane         mg/kg         NA         0.002 U           1.2-Dichloroptopane         mg/kg         NA         0.002 U           1.2-Dichloroptopane         mg/kg         NA         0.004 U           2-Hexanone         mg/kg         NA         0.004 U           Accione         mg/kg         NA         0.004 U	$\Box$	Antimony	mg/kg	0.43 UJ	NA	0.53 UJ	0.48 UJ
Mercuty         mg/kg         0.04 U         NA           Selentum         mg/kg         1.3 U         NA           Silver         mg/kg         0.17 UJ         NA           1.1.1.2-Trachlorocthane         mg/kg         NA         0.002 U           1.1.2-Trachlorocthane         mg/kg         NA         0.002 U           1.1.1-Trachlorocthane         mg/kg         NA         0.002 U           1.1.1-Dichlorocthane         mg/kg         NA         0.004 U           1.1.1-Dichlorocthane         mg/kg         NA         0.004 U           1.1.1-Dichlorocthane         mg/kg         NA         0.004 U           1.1-Dichlorocthane         mg/kg         NA         0.004 U           1.1-Dichlorocthane         mg/kg         NA         0.004 U           1.1-Dichlorocthane         mg/kg         NA         0.004 U           1.2-Dichlorocthane         mg/kg         NA         0.004 U           1.2-Dichlorocthane         mg/kg         NA         0.004 U           1.2-Dichlorocthane         mg/kg         NA         0.002 U           1.2-Dichlorocthane         mg/kg         NA         0.002 U           1.2-Dichlorocthane         mg/kg         NA		Lead	mg/kg	4.7	NA	10.4	4.9
Selentum         mg/kg         1.3 U         NA           Silver         mg/kg         0.17 UJ         NA           Thalltum         mg/kg         0.86 UJ         NA           1.1.1.2-Tertachlorocthane         mg/kg         NA         0.002 U           1.1.2-2-Tertachlorocthane         mg/kg         NA         0.002 U           1.1.2-1-Terthorocthane         mg/kg         NA         0.004 U           1.1.2-Trichlorocthane         mg/kg         NA         0.004 U           1.1.1-Dichlorocthane         mg/kg         NA         0.004 U           1.1.2-Trichlorocthane         mg/kg         NA         0.004 U           1.2-Dichlorocthane         mg/kg         NA         0.002 U           1.2-Dichlorocthane         mg/kg	$\neg$	Mercury	mg/kg	0.04 U	ΨN	0.04 U	0 03 U
Silver         mg/kg         0.17 UJ         NA           Thallium         mg/kg         0.86 UJ         NA           1.1.1.2-Tetrachlorocthane         mg/kg         NA         0.002 U           1.1.2.2-Terachlorocthane         mg/kg         NA         0.002 U           1.1.2.2-Terachlorocthane         mg/kg         NA         0.002 U           1.1.2-Trichlorocthane         mg/kg         NA         0.002 U           1.1-Dichlorocthane         mg/kg         NA         0.004 U           1.1-Dichlorocthane         mg/kg         NA         0.004 U           1.2-Dichorocthane         mg/kg         NA         0.004 U           1.2-Dichlorocthane         mg/kg         NA         0.002 U           1.2-Dichloropropane         mg/kg         NA         0.002 U           2-Chloro-1,3-butadiene         mg/kg         NA         0.002 U           Acctone         mg/kg         NA         0.004 U           Acctone         mg/kg         NA	П	Selenium	mg/kg	1.3 U	NA	0 32 UJ	1 4 UJ
Thalluum         mg/kg         0.86 UJ         NA           1.1.1.2-Tetrachloroethane         mg/kg         NA         0.002 U           1.1.1.2.2-Tetrachloroethane         mg/kg         NA         0.002 U           1.1.2.2-Tetrachloroethane         mg/kg         NA         0.002 U           1.1.2.2-Trichloroethane         mg/kg         NA         0.004 U           1.1.1-Dichloroethane         mg/kg         NA         0.004 U           1.1.1-Dichloroethane         mg/kg         NA         0.004 U           1.1.2-Dichloroethane         mg/kg         NA         0.004 U           1.2.3-Trichloroptopane         mg/kg         NA         0.004 U           1.2-Dichromoethane (Ethylene dibromide)         mg/kg         NA         0.002 U           1.2-Dichloroethane         mg/kg         NA         0.002 U           1.2-Dichloroethane         mg/kg         NA         0.002 U           1.2-Dichloroethane         mg/kg         NA         0.004 U           1.2-Dichloroethane         mg/kg         NA         0.004 U           2-Chloro-1,3-butadiene         mg/kg         NA         0.004 U           Acetone         mg/kg         NA         0.004 U           Acetone	Ī	Silver	mg/kg	0.17 UJ	NA	0 21 UJ	U 61 0
1.1.1.2-Tetrachloroethane         mg/kg         NA         0.002 U           1.1.1.2.7-Trichloroethane         mg/kg         NA         0.003 U           1.1.2.2-Tetrachloroethane         mg/kg         NA         0.002 U           1.1.2.7-Trichloroethane         mg/kg         NA         0.004 U           1.1.1-Dichloroethane         mg/kg         NA         0.004 U           1.1.2-Trichloroptopane         mg/kg         NA         0.004 U           1.2.3-Trichloroptopane         mg/kg         NA         0.004 U           1.2-Dichromoethane (Ethylene dibromide)         mg/kg         NA         0.002 U           1.2-Dichromoethane         mg/kg         NA         0.002 U           1.2-Dichloroptopane         mg/kg         NA         0.002 U           1.2-Dichloroptopane         mg/kg         NA         0.002 U           1.2-Dichloroptopane         mg/kg         NA         0.004 U           1.2-Dichloroptopane         mg/kg         NA         0.004 U           2-Chloro-1,3-butadiene         mg/kg         NA         0.004 U           Acetone         mg/kg         NA         0.004 U           Acetone         mg/kg         NA         0.002 U           Acetone	_	Thailium	mg/kg	0.86 UI	NA	1.1 U	4.8 UJ
1.1.1-Trichlorocthane         mg/kg         NA         0.003 U           1.1.2.2-Tetrachlorocthane         mg/kg         NA         0.002 U           1.1.2.2-Trichlorocthane         mg/kg         NA         0.004 U           1.1-Dichlorocthane         mg/kg         NA         0.004 U           1.1-Dichlorocthane         mg/kg         NA         0.004 U           1.2.3-Trichloropropane         mg/kg         NA         0.004 U           1.2-Dibromo-3-chloropropane         mg/kg         NA         0.002 U           1.2-Dibromoethane (Ethylene dibromide)         mg/kg         NA         0.002 U           1.2-Dibromoethane         mg/kg         NA         0.002 U           1.2-Dibromoethane         mg/kg         NA         0.004 U           2-Chloro-1,3-butadiene         mg/kg         NA         0.004 U           2-Chloro-1,3-butadiene         mg/kg         NA         0.004 U           Actione         mg/kg         NA         0.004 U           Actione         mg/kg         NA         0.079 U           Actione         mg/kg         NA         0.079 U           Actioner         mg/kg         NA         0.079 U	_	1,1,1,2-Tetrachloroethane	mg/kg	NA	0.002 U	0.003 U	0.003 U
1.1.2.2-Tetrachlorocethane         mg/kg         NA         0.002 U           1.1.2-Trchlorocethane         mg/kg         NA         0.004 U           1.1-Dichlorocethane         mg/kg         NA         0.004 U           1.1-Dichlorocethane         mg/kg         NA         0.004 U           1.2-3-Trichloropropane         mg/kg         NA         0.004 U           1.2-Dibromocthane (Ethylene dibromide)         mg/kg         NA         0.004 U           1.2-Dichlorocethane         mg/kg         NA         0.002 U           2-Chloro-1,3-butadiene         mg/kg         NA         0.004 U           2-Chloro-1,3-butadiene         mg/kg         NA         0.004 U           Acctoine         mg/kg         NA         0.004 U           Acctoine         mg/kg         NA         0.079 U           Acctoine         mg/kg         NA         0.079 U           Accrollen         mg/kg         NA         0.079 U	$\dashv$	1,1,1-Trichloroethane	mg/kg	NA	0.003 U	0 004 U	0.004 U
1,1,2-Trichlorocthane         mg/kg         NA         0.004 U           1,1-Dichlorocthane         mg/kg         NA         0.004 U           1,1-Dichlorocthane         mg/kg         NA         0.004 U           1,2-3-Trichloropropane         mg/kg         NA         0.004 U           1,2-Dibromocthane (Ethylene dibromide)         mg/kg         NA         0.004 U           1,2-Dibromocthane         mg/kg         NA         0.002 U           1,2-Dichloropropane         mg/kg         NA         0.002 U           1,2-Dichloropropane         mg/kg         NA         0.002 U           1,2-Dichloropropane         mg/kg         NA         0.002 U           2-Chloro-1,3-butadiene         mg/kg         NA         0.004 U           2-Chloro-1,3-butadiene         mg/kg         NA         0.004 U           Accione         mg/kg         NA         0.004 U           Accione         mg/kg         NA         0.004 U           Accioner         mg/kg         NA         0.004 U           Acciolen         mg/kg         NA         0.004 U           Acrolen         mg/kg         NA         0.004 U           Acrolen         mg/kg         NA         0.0	_	1,1,2,2-Tetrachloroethane	mg/kg	NA	0.002 U	0 002 UJ	0.002 U
1.1-Dichlorocethane         mg/kg         NA         0 002 U           1.1-Dichlorocethene         mg/kg         NA         0 004 U           1.2.3-Trichloropropane         mg/kg         NA         0.004 U           1.2-Dibromochane (Ethylene dibromide)         mg/kg         NA         0.004 U           1.2-Dibromochane (Ethylene dibromide)         mg/kg         NA         0.002 U           1.2-Dichlorochane         mg/kg         NA         0.002 U           1.2-Dichloropropane         mg/kg         NA         0.002 U           2-Chloro-1,3-butadhene         mg/kg         NA         0.004 U           2-Chloro-1,3-butadhene         mg/kg         NA         0.004 U           Actione         mg/kg         NA         0.004 U           Actione         mg/kg         NA         0.004 U           Actione         mg/kg         NA         0.032 U           Actione         mg/kg         NA         0.003 U           Actione         mg/kg         NA         0.079 U           Actione         mg/kg         NA         0.079 U	_+	1,1,2-Trichloroethane	mg/kg	NA	0.004 U	0.005 U	0 004 U
1.1-Dichlorocethene         mg/kg         NA         0 004 U           1.2,3-Trichloropropane         mg/kg         NA         0.004 U           1.2-Dibromo-3-chloropropane         mg/kg         NA         0.002 U           1.2-Dibromoethane (Ethylene dibromide)         mg/kg         NA         0.002 U           1.2-Dichlorocethane         mg/kg         NA         0.002 U           1.2-Dichloropropane         mg/kg         NA         0.002 U           2-Chloro-1,3-butadiene         mg/kg         NA         0.004 U           2-Chloro-1,3-butadiene         mg/kg         NA         0.004 U           Actione         mg/kg         NA         0.004 U           Actione         mg/kg         NA         0.032 U           Actione         mg/kg         NA         0.032 U           Actiolein         mg/kg         NA         0.032 U           Actiolein         mg/kg         NA         0.079 U	$\overline{}$	1,1-Dichloroethane	mg/kg	NA	0 002 U	0.002 U	0 002 U
1,2,3-Trichloropropane         mg/kg         NA         0.004 U           1,2-Dibromoethane (Ethylene dibromide)         mg/kg         NA         0.002 U           1,2-Dibromoethane (Ethylene dibromide)         mg/kg         NA         0.002 U           1,2-Dichloropropane         mg/kg         NA         0.002 U           2-Chloro-1,3-butadiene         mg/kg         NA         0.004 U           2-Chloro-1,3-butadiene         mg/kg         NA         0.004 U           Acetone         mg/kg         NA         0.004 U           Acetone         mg/kg         NA         0.032 U           Acrolein         mg/kg         NA         0.032 U           Acrolein         mg/kg         NA         0.079 U           Acrylonitrile         mg/kg         NA         0.079 U	_	1,1-Dichloroethene	mg/kg	NA	0 004 U	0.005 U	0 004 U
1,2-Dibtomoo-3-chloropropane         mg/kg         NA         0.004 U           1,2-Dibtomoethane (Ethylene dibromide)         mg/kg         NA         0.002 U           1,2-Dichloroperane         mg/kg         NA         0.002 U           2-Chloro-1,3-butadiene         mg/kg         NA         0.004 U           2-Hexanone         mg/kg         NA         0.004 U           Acetone         mg/kg         NA         0.004 U           Accontrile         mg/kg         NA         0.032 U           Acrolein         mg/kg         NA         0.079 U           Acrolein         mg/kg         NA         0.079 U           Acrylonitrile         mg/kg         NA         0.079 U		1,2,3-Trichloropropane	mg/kg	NA	0.004 U	0.005 UJ	0.004 U
1,2-Dibromoethane (Ethylene dibromide)         mg/kg         NA         0.002 U           1,2-Dichlorocthane         mg/kg         NA         0.002 U           1,2-Dichloropropane         mg/kg         NA         0.002 U           2-Chloro-1,3-butadiene         mg/kg         NA         0.004 U           Acetone         mg/kg         NA         0.004 U           Acetonic         mg/kg         NA         0.032 U           Acrolein         mg/kg         NA         0.079 U           Acrolein         mg/kg         NA         0.079 U		1,2-Dibromo-3-chloropropane	mg/kg	NA	0.004 U	0 005 UJ	0 004 U
1.2-Dichilorocethane         mg/kg         NA         0.002 U           1,2-Dichloropropane         mg/kg         NA         0.002 U           2-Chloro-1,3-butadiene         mg/kg         NA         0.004 U           2-Hexanone         mg/kg         NA         0.004 U           Acetone         mg/kg         NA         0.004 U           Acetonerile         mg/kg         NA         0.032 U           Acrolein         mg/kg         NA         0.079 U           Acrylonitrile         mg/kg         NA         0.079 U	_	1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	0.002 U	0 003 U	0 003 U
1,2-Dichloropzopane         mg/kg         NA         0 002 U           2-Chloro-1,3-butadiene         mg/kg         NA         0.004 U           2-Hexanone         mg/kg         NA         0.004 U           Acetone         mg/kg         NA         0.004 U           Acetontrile         mg/kg         NA         0.004 U           Acrolein         mg/kg         NA         0.032 U           Acrolein         mg/kg         NA         0.079 U           Acrylonitrile         mg/kg         NA         0.075 U	_	1,2-Dichioroethane	mg/kg	NA	0.002 U	0 003 U	0.003 U
2-Chloro-1,3-butadiene         mg/kg         NA         0.004 U           2-Hexanone         mg/kg         NA         0.004 U           Acetone         mg/kg         NA         0.004 U           Acetonitrile         mg/kg         NA         0.032 U           Acrolein         mg/kg         NA         0.079 U           Acrylonitrile         mg/kg         NA         0.079 U		1,2-Dichloropropane	mg/kg	NA	0 002 U	0.002 U	0 002 U
2-Hexanone         mg/kg         NA         0.004 U           Acetone         mg/kg         NA         0.004 U           Acetontrile         mg/kg         NA         0.032 U           Acrolein         mg/kg         NA         0.079 U           Acrylontrile         mg/kg         NA         0.079 U	$\neg$	2-Chloro-1, 3-butadiene	mg/kg	NA	0.004 U	0 005 U	0.004 U
Acetone         mg/kg         NA         0 004 U           Actolein         mg/kg         NA         0 032 U           Acrolein         mg/kg         NA         0.079 U           Acrylonitrile         mg/kg         NA         0 032 U	_	2-Hexanone	mg/kg	NA	0.004 U	0 005 U	0 004 U
Acetomurile         mg/kg         NA         0 032 U           Acrolein         mg/kg         NA         0.079 U           Acrylonitrile         mg/kg         NA         0 032 U	T	Acetone	mg/kg	NA	0 004 U	0.005 U	0.004 U
Acrolein         mg/kg         NA         0.079 U           Acrylonitrile         mg/kg         NA         0.032 U	T	Acetonitrile	mg/kg	NA	0 032 U	0.04 U	0.036 U
Acrytonitrile ng/kg NA 0 032 U	┪	Acrolein	mg/kg	NA	U 670.0	010	O 680.0
		Acrylonitrile	mg/kg	NA	0 032 U	0.04 U	0.036 U

Table E.1 Comprehensive Soil Results AOC 19 NAS Fort Worth JRB, Texas

		,	BHGLAOC1901 10 ft	BHGLAOC1901 10 ft	BHGLAOC1902 00 ft.	BHGLAOC1902 05 ft
Method	Analyte	Unit	2000-05-12	2000-05-26	2000-05-15	2000-05-15
SW8260B	Allyl chloride (3-Chloropropene)	mg/kg	NA	0 008 U	0.01 U	O 000 U
SW8260B	Benzene	mg/kg	NA	0 005 U	0.002 U	0.002 U
SW8260B	Bromodichloromethane	mg/kg	NA	0.003 U	0 004 U	0.004 U
SW8260B	Bromoform	mg/kg	NA	0.004 U	0.005 U	0.004 U
SW8260B	Bromomethane	mg/kg	NA	0.004 U	0.005 U	0.004 U
SW8260B	Carbon disulfide	mg/kg	NA	0.004 U	0 002 U	0.004 U
SW8260B	Carbon tetrachloride	mg/kg	NA	0 004 U	0.005 U	0.004 U
SW8260B	Chlorobenzene	mg/kg	NA	0.002 U	0.002 U	0.002 U
SW8260B	Chloroethane	mg/kg	NA	0.004 U	0.005 U	0 004 U
SW8260B	Chloroform	mg/kg	NA	0.002 U	0.002 U	0 002 U
SW8260B	Chloromethane	mg/kg	NA	0.004 U	0 005 U	0.004 U
SW8260B	cis-1,2-Dichloroethene	mg/kg	NA	0.005	0 000 U	0 004 U
SW8260B	cis-1,3-Dichloropropene	mg/kg	NA	0.004 U	0.005 U	0.004 U
SW8260B	Dibromochloromethane	mg/kg	NA	0.002 U	0.003 U	0.003 U
SW8260B	Dibromomethane	mg/kg	NA	0.004 U	0.005 U	0.004 U
SW8260B	Dichlorodifluoromethane	mg/kg	NA	0.004 U	0.006 U	0.004 U
SW8260B	Ethyl methacrylate	mg/kg	NA	0 004 U	0.005 U	0 004 U
SW8260B	Ethylbenzene	mg/kg	NA	0 002 U	0.003 U	0.003 U
SW8260B	Iodomethane (Methyl iodide)	mg/kg	NA	0.004 U	0.005 U	0.004 U
SW8260B	Isobutanol	mg/kg	NA	0.16 U	0.2 U	0.18 U
SW8260B	m,p-Xylene (sum of isomers)	mg/kg	NA	0 004 U	0 005 U	0 004 U
SW8260B	Methyl ethyl ketone (2-Butanone)	mg/kg	NA	0.004 U	0.005 U	0.004 U
SW8260B	Methyl isobutyl ketone (4-Methyl-2-pentanone)	mg/kg	NA	0.004 U	0.005 U	0.004 U
SW8260B	Methyl methacrylate	mg/kg	NA	0 004 U	0.005 U	0.004 U
SW8260B	Methylacrylonitrile	mg/kg	NA	0.004 U	0.005 U	0.004 U
SW8260B	Methylene chloride	mg/kg	NA	0 002 U	0.002 U	0.002 U
SW8260B	o-Xylene (1,2-Dimethylbenzene)	mg/kg	NA	0.004 U	0 005 U	0.004 U
SW8260B	Pentachloroethane	mg/kg	NA	0.004 U	0.01 UJ	0.004 U
SW8260B	Propane nitrile (Propionitrile)	mg/kg	NA	0.016 U	0.02 U	0.018 U
SW8260B	Styrene	mg/kg	NA	0.002 U	0 002 U	0.002 U
SW8260B	Tert-Butyl Methyl Ether	mg/kg	NA	0.004 U	0.005 U	0.004 U
SW8260B	Tetrachloroethene (PCE)	mg/kg	NA	0 004 U	0.005 U	0.004 U
SW8260B	Toluene	mg/kg	NA	0.004 U	0.005 U	0.004 U
SW8260B	Trans-1,2-Dichloroethene	mg/kg	NA	0.002 U	0.003 U	0.003 U



Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

* * **	A THE RESIDENCE OF THE PARTY OF		BHGLAOC1901 10 ft	BHGLAOC1901 10 ft	BHGLAOC1902 00 ft	BHGLAOCI902 05 P
	Analyte	Unit	2000-05-12	2000-05-26	2000-05-15	2000-05-15
T	Trans-1,3-Dichloropropene	mg/kg	NA	0.004 U	0.005 U	0 004 U
7	Trans-1,4-Dichloro-2-Butene	mg/kg	NA	0.004 U	0 005 U	0.004 U
	Trichloroethene (TCE)	mg/kg	NA	0.019	0.019	0.008
	Trichlorofluoromethane	mg/kg	NA	0.003 U	0.004 U	0.004 U
	Vinyi acetate	mg/kg	NA	0.004 U	0.005 U	0.004 U
$\neg$	Vinyl chloride	mg/kg	NA	0 004 U	0.005 U	0.004 U
	1,2,4,5-Tetrachlorobenzene	mg/kg	0.35 U	NA	0 38 U	0.35 U
SW8270C	1,2,4-Trichlorobenzene	mg/kg	0.35 U	NA	0.38 U	0 35 U
SW8270C	1,2-Dichlorobenzene	mg/kg	0 35 U	NA	0.38 U	0.35 U
	1,3,5-Trinitrobenzene	mg/kg	1.4 U	NA	150	1.4 U
	1,3-Dichlorobenzene	mg/kg	0 35 U	NA	0.38 U	0.35 U
	1,3-Dinitrobenzene	mg/kg	0.7 U	NA	0.76 U	0.7 U
$\neg$	1,4-Dichlorobenzene	mg/kg	0.35 U	NA	0 38 U	0 35 U
_	1,4-Dioxane (p-Dioxane)	mg/kg	1.4 U	VN	1.5 U	1.4 U
	1,4-Naphthoquinone	mg/kg	1.8 R	VN	19R	1.8 R
	1-Naphthylamine	mg/kg	0.7 U	VN	0.76 U	0.7 U
	2,2'-Oxybıs(1-chloropropane)	mg/kg	0.35 U	AN	0.38 U	0.35 U
	2,3,4,6-Tetrachlorophenol	mg/kg	0.35 U	NA	0.38 U	0.35 U
	2,4,5-Trichlorophenol	mg/kg	18U	VN	19U	1.8 U
- 1	2,4,6-Trichlorophenol	mg/kg	0.35 U	٧N	0.38 U	0.35 U
П	2,4-Dichlorophenol	mg/kg	0.35 U	VN	0 38 U	0.35 U
Т	2,4-Dimethylphenol	mg/kg	0.35 U	W	0.38 U	0.35 U
7	2,4-Dinitrophenol	mg/kg	1.8 R	VN	1.9 U	1.8 U
$\neg$	2,4-Dinitrotoluene	mg/kg	0.35 U	WA	0 38 U	0.35 U
_	2,6-Dichlorophenol	mg/kg	0 35 U	VN	0 38 U	0.35 U
	2,6-Dinitrotoluene	mg/kg	0 35 U	NA	0.38 U	0.35 U
Т	2-Acetylaminofluorene	mg/kg	0.7 U	VN	0 76 U	0.7 U
П	2-Aminonaphthalene (beta-Naphthylamine)	mg/kg	0 7 U	NA	0 76 U	0.7 U
Т	2-Chloronaphthalene	mg/kg	0 35 U	NA	0 38 U	0.35 U
	2-Chlorophenol	mg/kg	0.35 U	NA	0.38 U	0.35 U
一	2-Methylnaphthalene	mg/kg	0 35 U	WA	0.38 U	0.35 U
ヿ	2-Methylphenol (o-Cresol)	mg/kg	0.35 U	NA	0 38 U	0.35 U
	2-Nitroandine	mg/kg	1.8 U	NA	1.9 U	1.8 U
SW8270C	2-Nitrophenol	mg/kg	0.35 U	VN	0.38 U	0.35 U

*			BHGLAOC1901 10 ft	BHGLAOC1901 10 ft	BHGLAOC1902 00 ft	BHGLAOC1902 05 ft
Method	Analyte	Unit	2000-05-12	2000-05-26	2000-05-15	2000-05-15
SW8270C	2-Picoline (alpha-Picoline)	mg/kg	0.35 U	NA	Ω 8€'0	0 35 U
SW8270C	3,3'-Dichlorobenzidine	mg/kg	0 7 U	NA	0.76 U	0.7 U
SW8270C	3,3'-Dimethylbenzidine	mg/kg	1 8 U	NA	1 θ Ω	1.8 U
SW8270C	3-Methylcholanthrene	mg/kg	0.35 U	NA	O 38 O	0.35 U
SW8270C	3-Nitroaniline	mg/kg	1.8 U	NA	1.9 U	1.8 U
SW8270C	4,6-Dinitro-2-methylphenol	mg/kg	1.8 U	NA	1.9 U	1.8 U
SW8270C	4-Aminobiphenyl (4-Biphenylamine)	mg/kg	0.7 U	NA	0.76 U	Ω Δ 0
SW8270C	SW8270C [4-Bromophenyl phenyl ether	mg/kg	0 35 U	NA	O 38 O	0.35 U
SW8270C	SW8270C [4-Chloro-3-methylphenol	mg/kg	0.35 U	NA	0.38 U	0 35 U
SW8270C	SW8270C 4-Chloroanline	mg/kg	0.35 U	NA	0.38 U	0 35 U
SW8270C	SW8270C   4-Chlorophenyl phenyl ether	mg/kg	0.35 U	NA	0.38 U	0 35 U
SW8270C	[4-Methylphenol (P-Cresol)	mg/kg	NA	NA	NA	NA
SW8270C	4-Nitroaniline	mg/kg	1.8 U	NA	1 9 U	1.8 U
SW8270C	4-Nitrophenol	mg/kg	1 8 U	NA	1.9 U	1.8 U
SW8270C	4-Nitroquinoline-1-oxide	mg/kg	18R	NA	1.9 R	1.8 R
SW8270C	5-Nitro-o-toluidine	mg/kg	0 7 U	NA	0.76 U	U.7.0
SW8270C	7,12-Dimethylbenzo(a)anthracene	mg/kg	0.7 U	NA	0.76 U	070
SW8270C	Acenaphthene	mg/kg	0.35 U	NA	0.38 U	0.35 U
SW8270C	Acenaphthylene	mg/kg	0.35 U	NA	0 38 U	0.35 U
SW8270C	Acetophenone	mg/kg	0.35 U	NA	0 38 U	0.35 U
SW8270C	alpha, alpha-Dimethylphenethylamine	mg/kg	1 8 U	NA	1.9 U	1.8 U
SW8270C	Aniline (Phenylamine, Aminobenzene)	mg/kg	0.35 U	NA	0.38 U	0.35 U
SW8270C	Anthracene	mg/kg	0.35 U	NA	0.38 U	0.35 U
SW8270C	Aramite (total)	mg/kg	0.7 U	NA	0 92 O	0.7 U
SW8270C	Benzo(a)anthracene	mg/kg	0.35 U	NA	0 38 U	0.35 U
SW8270C	Benzo(a)pyrene	mg/kg	0 35 U	NA	0.38 U	0.35 U
SW8270C	Benzo(b)fluoranthene	mg/kg	0.35 U	NA	0.38 U	0.35 U
		mg/kg	0.35 U	NA	0.38 U	0.35 U
SW8270C	Benzo(k)fluoranthene	mg/kg	0.35 U	NA	0.38 U	0.35 U
SW8270C	Benzoic acid	mg/kg	1.8 U	NA	1.9 U	1.8 U
SW8270C		mg/kg	0.35 U	NA	0 38 U	0.35 U
SW8270C		mg/kg	0 35 U	NA	0.38 U	0.35 U
SW8270C	bis(2-Chloroethoxy)methane	mg/kg	0 35 U	NA NA	0.38 U	0 35 U

Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

			BHGLAOC1961 10 ft	BHC! AOC1901 10 6	a w corpor iona	DITOT ACCIONA OF RE
Method	Analyte	Unit	2000-05-12	2000-05-26	2000-05-15	2000-05-15
SW8270C	bis(2-Chloroethyl)ether (2-Chloroethyl ether)	mg/kg	0.35 U	NA	0.38 U	0.35 U
SW8270C	bis(2-Ethylhexyl)phthalate	mg/kg	0 35 U	NA	0.38 U	0.35 U
$\neg$	Chlorobenzılate	mg/kg	0.35 U	NA	0 38 U	0.35 U
$\neg$	Chrysene	mg/kg	0.35 U	NA	0.38 U	0 35 U
<b>-</b> -↑	Cresols, m & p	mg/kg	0.35 U	NA	0.38 U	0.35 U
$\neg$	Diallate (total of cis and trans isomers)	mg/kg	0 35 U	NA	0.38 U	0.35 U
$\neg$	Dibenz(a,h)anthracene	mg/kg	0.35 U	NA	0.38 U	0 35 U
7	Dibenzofuran	mg/kg	0.35 U	NA	0.38 U	0.35 U
	Diethyl phthalate	mg/kg	0.35 U	NA	0.38 U	0.35 U
т	Dimethyl phthalate	mg/kg	0.35 U	NA	0 38 U	0.35 U
т	Di-n-butyl phthalate	mg/kg	0.35 U	NA	0 38 U	0 35 U
	Di-n-octyl phthalate	mg/kg	0 35 U	NA	0.38 U	0 35 U
	Dinoseb	mg/kg	0 7 U	NA	0.76 U	0.7 U
Т	Diphenylamine	mg/kg	0 35 U	NA	0 38 U	0.35 U
$\neg$	Ethyl methanesulfonate	mg/kg	0.35 U	NA	0 38 U	0.35 U
SW8270C	Fluoranthene	mg/kg	0.35 U	NA	0 38 U	0.35 U
SW8270C Fluorene	Fluorene	mg/kg	0 35 U	NA	0 38 U	0 35 U
SW8270C	SW8270C Hexachlorobenzene	mg/kg	0.35 U	NA	0.38 U	0 35 U
SW8270C	Hexachlorobutadiene	mg/kg	0.35 U	VN	0.38 U	0 35 U
SW8270C	SW8270C Hexachlorocyclopentadiene	mg/kg	0.35 U	VA	0.38 U	0.35 U
SW8270C	SW8270C Hexachloroethane	mg/kg	0.35 R	VΝ	0 38 U	0.35 U
	Hexachlorophene	mg/kg	5.3 R	VN	5.7 R	5.3 R
SW8270C	Hexachloropropene	mg/kg	18U	W	U 6.1	1.8 U
SW82/0C	Indeno(1,2,3-c,d)pyrene	mg/kg	0.35 U	NA	0 38 U	0.35 U
_	Isophorone	mg/kg	0.35 U	NA	0 38 U	0.35 U
	Isosatrole	mg/kg	0 35 U	NA	0.38 U	0.35 U
	Methapyrilene	mg/kg	1.8 U	NA	1.9 U	1.8 U
- 1	Methyl methanesulfonate	mg/kg	0.7 U	NA	0.76 U	0.7 U
_	Naphthalene	mg/kg	0 35 U	NA	0.38 U	0.35 U
7	Nitrobenzene	mg/kg	0,35 U	NA	0.38 U	0.35 U
$\neg$	N-Nitrosodiethylamine	mg/kg	0.7 U	NA	0 76 U	0.7 U
$\neg$	N-Introsodimethylamine	mg/kg	0.35 U	NA	0.38 U	0.35 U
SW82/0C	N-Mitrosodi-n-butylamine	mg/kg	0.35 U	NA	0.38 U	0.35 U
71	14-1410 OSOXII-II-propylamine	mg/kg	0.35 U	NA	0.38 U	0.35 U

Table E.1 Comprehensive Soil Results AOC 19 NAS Fort Worth JRB, Texas

,		,	BHGLAOC1901 10 ft	BHGLAOC1901 10 ft	BHGLAOC1902 00 ft	BHGLAOC1902 05 ft
Method	Analyte	Unit	2000-05-12	2000-05-26	2000-05-15	2000-05-15
SW8270C	SW8270C N-Nitrosodiphenylamine	mg/kg	0.35 U	NA	0.38 U	0.35 U
SW8270C	SW8270C N-Introsomethylethylamine	mg/kg	0.7 U	NA	Ω 92 0	07U
SW8270C	SW8270C N-Nitrosomorpholine	mg/kg	0.7 U	NA	0.76 U	0.7 U
SW8270C	SW8270C N-Nitrosopiperidine	mg/kg	0.35 U	Ϋ́N	0 38 U	0.35 U
SW8270C	SW8270C N-Nitrosopyrrolidine	mg/kg	1.8 U	NA	19 U	180
SW8270C	SW8270C o-Toluidine	mg/kg	0 35 U	NA	0 38 U	0.35 U
SW8270C	SW8270C p-Dimethylaminoazobenzene	mg/kg	0.7 U	NA	0.76 U	0.7 U
SW8270C	SW8270C   Pentachlorobenzene	mg/kg	0 35 U	NA	0.38 U	0 35 U
SW8270C	SW8270C Pentachlorontrobenzene	mg/kg	0.35 U	NA	0.38 U	0.35 U
SW8270C	SW8270C Pentachlorophenol	mg/kg	1.8 U	NA	U 9.1	1.8 U
SW8270C	SW8270C Phenacetin	mg/kg	0.7 U	NA	N 92.0	0.7 U
SW8270C	SW8270C Phenanthrene	mg/kg	0.35 U	NA	0.38 U	0.35 U
SW8270C Phenol	Phenol	mg/kg	0.35 U	NA	0.38 U	0.35 U
SW8270C	SW8270C p-Phenylenediamine	mg/kg	1.4 U	NA	1.5 U	1.4 U
SW8270C	SW8270C Pronamide	mg/kg	0.7 U	NA	Ω 92'0	Ω ′′.0
SW8270C Pyrene	Pyrene	mg/kg	0.35 U	NA	O 38 O	U 35 U
SW8270C Pyridine	Pyridine	mg/kg	0.7 U	NA NA	N 96 B	0.7 R
SW8270C Safrole	Safrole	mg/kg	0 35 U	NA NA	0.38 U	0.35 U



Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

2000-05-15  2.5 F  45.3 J  0.38 J  0.18 F  10.3 J  2 F  3 8 F  6 7 F  8 4 UJ  27 J  13.5 F  0.04 U  0.002 U  0.002 U  0.004 U				BHGLAOC1903 00 ft	BHGLAOC1903 00 ft	BHGLAOC1903 05 ft	BHGLAOC1904 00 ft
Arsenuc         mig/kg         3 F         4         2.5 F           Bartum         mig/kg         66.1 J         70.5 J         45.3 J           Ber/llum         mig/kg         0.41 F         0.84         0.58 J           Cadmium         mig/kg         0.21 F         0.22 F         0.18 F           Chopier         mig/kg         3.3 F         1.02 J         3.8 F           Copper         mig/kg         3.4 F         10.2 J         3.8 F           Nivel         mig/kg         3.5 F         2.1 J         2.7 J           Incad         mig/kg         3.6 F         2.9 JJ         3.7 J           Antimony         mig/kg         3.6 G         8.9 JJ         3.9 JJ           Antimony         mig/kg         0.47 JJ         0.79 JJ         8.4 JJ           Antimony         mig/kg         0.47 JJ         0.52 JJ         3.9 JJ           Antimony         mig/kg         0.04 JJ         0.02 JJ         0.43 JJ           Selenum         mig/kg         0.04 JJ         0.02 JJ         0.04 JJ           Shiver         mig/kg         0.04 JJ         0.02 JJ         0.04 JJ           J. L. Liz-Charcelhorechane         mig/kg         0.04	Method	Analyte	Unit	2000-05-15	2000-05-15 Dup	2000-05-15	2000-05-15
Beryllium         migkig         666.11         70 \$1         45.3.T           Cafanium         migkig         0.441         0.284         0.281           Cafanium         migkig         0.21F         0.284         0.281           Chromium, total         migkig         3.3 F         4.9         0.28 F           Cobper         migkig         3.4 F         10.2         3.8 F           Copper         migkig         8.1 F         10.7 J         6.7 F           Inted         migkig         8.9 J         7.9 UJ         8.4 UJ           Antimony         migkig         0.4 U         0.62 U         1.3.5 F           Antimony         migkig         0.4 U         0.62 U         0.4 U           Silver         migkig         0.4 U         0.64 U         0.64 U           Silver         migkig         0.19 U         0.64 U         0.03 U           LiLifridocethare         migkig         0.000 U         0.000 U         0.000 U           LiLifridocethare         migkig         0.000 U         0.000 U         0.000 U           LiLifridocethare         migkig         0.000 U         0.000 U         0.000 U           LiLifridocethare <t< td=""><td>SW6010B</td><td><math>\neg</math></td><td>mg/kg</td><td>3 F</td><td>4</td><td>2.5 F</td><td>2.8 F</td></t<>	SW6010B	$\neg$	mg/kg	3 F	4	2.5 F	2.8 F
Cadmium         mg/kg         0.441         0.64         0.39 F         0.38 J           Chrontum, total         mg/kg         1.21 F         0.29 F         0.88 J         0.88 J           Chobalt         mg/kg         3.3 F         4.9         2 F         0.03 F           Copher         mg/kg         3.4 F         10.2         3 F         0.03 F           Nucket         mg/kg         8.9 UJ         7.9 UJ         8.4 UJ         0.7 UJ           Nucket         mg/kg         8.9 UJ         7.9 UJ         8.4 UJ         0.0 UJ           Inchemony         mg/kg         1.7.2 F         26.2 JJ         13.5 F         1.1 J           Lead         mg/kg         0.47 UJ         0.52 UJ         0.43 UJ         0.04 U         0.02 U         0.04 U         0.02 U         0.04 U         0.002 U <td>SW6010B</td> <td></td> <td>mg/kg</td> <td>66.13</td> <td>70 5 J</td> <td>45.3 J</td> <td>81.1 J</td>	SW6010B		mg/kg	66.13	70 5 J	45.3 J	81.1 J
Cadmium         mg/kg         0.21 F         0.29 F         0.18 F           Chromium, total         mg/kg         3.3 F         14.9 J         10.3 J           Copper         mg/kg         3.3 F         10.2         2 F           Nickel         mg/kg         5.4 F         10.7 J         6.7 F           Nickel         mg/kg         8.9 UJ         7.9 UJ         8.4 UJ           Nuncel         mg/kg         26.5 F         29.1 J         2.71           Zine         mg/kg         17.2 F         26.2 J         13.5 F           Antimony         mg/kg         17.2 F         26.1 J         13.5 F           Antimony         mg/kg         1.4 UJ         0.4 U         0.4 U         0.4 U           Antimony         mg/kg         1.4 UJ         1.5 UJ         1.3 UJ         1.3 UJ           Antimony         mg/kg         0.19 UJ         0.21 UJ         0.4 U	SW6010B	Т	mg/kg	0 44 J	0.84	0.38 J	90
Chromatum, total         mg/kg         13.8 f         14.9 J         10.3 J           Cobper         mg/kg         5.4 F         10.2         3.8 F           Copper         mg/kg         5.4 F         10.2         3.8 F           Nickel         mg/kg         8.1 F         10.7 J         6.7 F           Nickel         mg/kg         26.5 F         29.1 J         27.1           Vandoum         mg/kg         26.5 F         29.1 J         27.1           Animony         mg/kg         17.2 F         26.2 J         3.5 F           Lead         mg/kg         5.6         8.9         5.9           Mercury         mg/kg         0.04 U         0.04 U         0.04 U           Scleman         mg/kg         0.04 U         0.04 U         0.04 U           Scliver         mg/kg         0.04 U         0.04 U         0.0	SW6010B	_	mg/kg	0.21 F	0.29 F	0 18 F	0.27 F
Cobalt         mg/kg         3.3 F         4.9         2 F           Ooper         mg/kg         8.4 F         10.2         3 F           Nockel         mg/kg         8.9 UJ         7.9 UJ         8.4 UJ           Tin         mg/kg         2.5 F         25.1 J         3.7 J           Zinc         mg/kg         2.5 F         25.1 J         2.7 J           Antimony         mg/kg         1.7.2 F         26.2 J         3.5 F           Autimony         mg/kg         0.47 UJ         0.52 UJ         0.43 UJ           Land         mg/kg         0.47 UJ         0.62 UJ         0.43 UJ           Selenum         mg/kg         0.49 UJ         0.62 UJ         0.43 UJ           Sillulum         mg/kg         0.04 U         0.04 U         0.04 U           1.1.1.2-Tetrachlorocthane         mg/kg         0.03 U         0.02 U         0.02 U           1.1.1.2-Tirchlorocthane         mg/kg         0.004 U         0.002 U         0.002 U           1.1.1.2-Tirchlorocthane         mg/kg         0.002 U         0.002 U         0.002 U           1.1.1.2-Tirchlorocthane         mg/kg         0.002 U         0.002 U         0.002 U           1.1.2-Tirchlorocthane	SW6010B		mg/kg	12 8 J	14.9 J	10.3 J	13.1 J
Octoper         mg/kg         5.4 F         10.2         3.8 F           Nickel         mg/kg         8.9 I F         10.7 I         6.7 F           Tin         Nickel         ng/kg         26.5 F         29.1 J         7.9 UJ           Variadium         mg/kg         26.5 F         29.1 J         27.1           Land         mg/kg         17.2 F         26.2 J         1.3.5 F           Antimony         mg/kg         1.7 L         20.1 J         0.40 U           Lead         mg/kg         0.04 U         0.04 U         0.04 U           Mercuny         mg/kg         0.04 U         0.04 U         0.04 U           Mercuny         mg/kg         0.04 U         0.04 U         0.04 U           Mercuny         mg/kg         0.03 U         0.01 U         0.02 U           Mercuny         mg/kg         0.03 U         0.02 U         0.02 U           Mercuny         mg/kg         0.03 U	SW6010B	Cobalt	mg/kg	3.3 F	4.9	2 F	3 F
Nuckel         maykg         8.1 F         10.7 J         6.7 F           Vanadum         maykg         8.5 F         29.1 J         7.9 UJ         8.4 UJ           Vanadum         maykg         2.6.5 F         29.1 J         27.1 J         27.1 J           Zine         maykg         17.2 F         29.1 J         27.1 J         27.1 J           Lead         maykg         0.47 UJ         0.52 UJ         0.43 UJ         0.43 UJ           Mercury         maykg         0.04 U         0.024 U         0.04 U         0.04 U         0.04 U           Silverium         maykg         0.19 UJ         1.1 UJ         1.3 UJ         4.3 UJ         3.1 UJ           Trallum         mg/kg         0.19 UJ         0.02 U         0.02 U         0.02 U         0.02 U           1.1.1.2Tricklorechtane         mg/kg         0.024 U         0.02 U         0.02 U         0.02 U           1.1.1.2Tricklorechtane         mg/kg         0.024 U         0.02 U         0.02 U         0.02 U           1.1.1.2.Tricklorechtane         mg/kg         0.024 U         0.02 U         0.02 U         0.02 U           1.1.2.Tricklorechtane         mg/kg         0.02 U         0.02 U         0.02 U	SW6010B	Copper	mg/kg	54F	10.2	38F	5.7 F
Time         migkg         8.9 UJ         7.9 UJ         8 4 UJ           Vanaduum         migkg         126.5 F         29.1 J         27 J           Zine         migkg         176.5 F         26.1 J         27 J           Zine         migkg         17.0 UJ         0.43 UJ         0.43 UJ           Acad         migkg         0.44 U         0.52 UJ         0.44 U           Selentum         migkg         0.04 U         0.04 U         0.04 U           Selentum         migkg         0.19 UJ         1.6 UJ         1.3 UJ           Silver         1.1.1-Trickloroctlane         migkg         0.04 U         0.02 U         0.17 UJ           1.1.1-Trickloroctlane         migkg         0.04 U         0.002 U         0.002 U         0.002 U           1.1.1-Trickloroctlane         migkg         0.04 U         0.002 U         0.002 U         0.002 U           1.1.1-Trickloroctlane         migkg         0.004 U         0.002 U         0.002 U         0.002 U           1.1.2-Trickloroctlane         migkg         0.004 U         0.002 U         0.002 U         0.002 U           1.1.1-Dickloroctlane         migkg         0.004 U         0.002 U         0.002 U         0.002 U <td></td> <td><math>\neg</math></td> <td>mg/kg</td> <td>81F</td> <td>10.7 J</td> <td>67F</td> <td>8 J</td>		$\neg$	mg/kg	81F	10.7 J	67F	8 J
Vanaduum         mg/kg         26.5 F         29.11         271           Zine         Sine         26.2 J         13.5 F           Land         ng/kg         0.47 UJ         0.52 UJ         13.5 F           Artimony         mg/kg         5.6         8.9         5.9           Mercury         mg/kg         0.04 U         0.04 U         0.04 U           Schenum         mg/kg         0.04 U         0.04 U         0.04 U           Schenum         mg/kg         0.10 UJ         0.11 UJ         4.3 UJ           Trallum         mg/kg         0.04 U         0.04 U         0.04 U           1.1.1.2-Tertachorcethane         mg/kg         0.004 U         0.02 U         0.02 U           1.1.1.2-Trichlorcethane         mg/kg         0.004 U         0.002 U         0.002 U           1.1.1.2-Trichlorcethane         mg/kg         0.002 U         0.002 U         0.002 U           1.1.1.2-Trichlorcethane         mg/kg         0.002 U         0.002 U         0.002 U           1.1.1.2-Trichlorcethane         mg/kg         0.002 U         0.002 U         0.002 U           1.1.2-Inchlorcethane         mg/kg         0.002 U         0.002 U         0.002 U           1.2-D			mg/kg	8.9 UJ	7.9 UJ	8 4 UJ	6.8 UJ
Zine         Majer         17.2 F         26.2 J         13.5 F           Antimony         Majer         17.2 F         26.2 J         13.5 F           Lead         Antimony         mg/kg         5.6         8.9         5.9           Mercury         mg/kg         0.04 U         0.04 U         0.04 U           Selentum         mg/kg         0.04 U         0.04 U         0.04 U           Silver         mg/kg         0.019 U         1.0 U         1.3 UJ           1.1.1.1.2-Terrachlorochane         mg/kg         0.03 U         0.02 U         0.02 U           1.1.1.2-Trichlorochane         mg/kg         0.02 U         0.02 U         0.02 U           1.1.2-Trichlorochane         mg/kg         0.02 U         0.02 U         0.02 U           1.1.2-Trichlorochane         mg/kg         0.02 U         0.02 U         0.02 U           1.1.2-Trichlorochane         mg/kg         0.02 U         0.02 U         0.02 U           1.1.1-Dichlorochane         mg/kg         0.02 U         0.02 U         0.02 U           1.1.1-Dichlorochane         mg/kg         0.02 U         0.02 U         0.02 U           1.1.2-Trichlorochane         mg/kg         0.02 U         0.02 U <t< td=""><td>SW6010B</td><td></td><td>mg/kg</td><td>26.5 F</td><td>29.1 J</td><td>27 J</td><td>25.5 J</td></t<>	SW6010B		mg/kg	26.5 F	29.1 J	27 J	25.5 J
Antimony         mg/kg         0.47 UJ         0.52 UJ         0.43 UJ           Lead         Medical         5.6         8.9         5.9           Mectuary         mg/kg         0.04 U         0.04 U         0.64 U           Selentum         mg/kg         0.19 UJ         1.6 UJ         1.3 UJ           Selentum         mg/kg         0.19 UJ         0.21 UJ         1.3 UJ           Thallium         mg/kg         0.19 UJ         0.21 UJ         4.3 U           Thallium         mg/kg         0.003 U         0.002 U         0.002 U           1.1.1.7.1.7.1.7.2.Tetrachlorocethane         mg/kg         0.004 U         0.002 U         0.002 U           1.1.Dichlorocethane         mg/kg         0.004 U         0.002 U         0.002 U           1.1.Dichlorocethane         mg/kg         0.004 U         0.002 U         0.002 U           1.1.Dichlorocethane         mg/kg         0.004 U         0.005 U         0.002 U           1.1.Dichlorocethane         mg/kg         0.004 U         0.005 U         0.002 U           1.1.Dichlorocethane         mg/kg         0.004 U         0.005 U         0.002 U           1.2.Dichrono-3-chloropropane         mg/kg         0.004 U         0.005 U </td <td>SW6010B</td> <td></td> <td>mg/kg</td> <td>17.2 F</td> <td>26 2 J</td> <td>13.5 F</td> <td>17.7 F</td>	SW6010B		mg/kg	17.2 F	26 2 J	13.5 F	17.7 F
Lead         5.6         8.9         5.9           Mercury         ng/kg         0.04 U         0.04 U         0.04 U           Selentum         mg/kg         0.04 U         0.04 U         0.04 U           Selentum         mg/kg         1.4 UJ         1.6 UJ         1.3 UJ           Silver         ng/kg         0.03 U         0.0         0.17 UJ           Tallium         ng/kg         0.003 U         0.0         0.002 U           1.1.1.2-Tetrachlorocthane         ng/kg         0.004 U         0.002 U         0.002 U           1.1.2-Trichlorocthane         ng/kg         0.004 U         0.002 U         0.002 U           1.1.2-Trichlorocthane         ng/kg         0.004 U         0.005 U         0.002 U           1.2-Dichlorocthane         ng/kg         0.004 U         0.005 U         0.002 U           1.2-Dichlorocthane         ng/kg         0.004 U         0.005 U         0.002 U	SW7041	Antimony	mg/kg	0 47 UJ	0 52 UJ	0 43 UJ	0.48 UJ
Metcury         mg/kg         0.04 U         0.04 U         0.04 U           Selenum         mg/kg         1.4 UJ         1.6 UJ         1.3 UJ           Thallum         mg/kg         1.4 UJ         0.17 UJ         4.3 U           1.1.1.2-Tetrachlorocthane         mg/kg         0.03 U         0.02 U         0.02 U           1.1.2-Trichlorocthane         mg/kg         0.004 U         0.002 U         0.002 U           1.1.2-Trichlorocthane         mg/kg         0.004 U         0.002 U         0.002 U           1.1.2-Trichlorocthane         mg/kg         0.004 U         0.002 U         0.004 U           1.1.2-Trichlorocthane         mg/kg         0.004 U         0.002 U         0.004 U           1.1.Dichlorocthane         mg/kg         0.004 U         0.005 U         0.004 U           1.1.Dichlorocthane         mg/kg         0.004 U         0.005 U         0.004 U           1.2-Dichlorocthane         mg/kg         0	SW7421	$\neg$	mg/kg	5.6	8.9	5.9	6.9 J
Selentum         mg/kg         1.4 UJ         1.6 UJ         1.3 UJ           Silver         mg/kg         0.19 UJ         0.21 UJ         0.17 UJ           Thallum         mg/kg         0.093 U         0.002 U         0.002 U           1.1.1.2.7Ertzechloroethane         mg/kg         0.002 U         0.002 U         0.002 U           1.1.1.2.7Ertzechloroethane         mg/kg         0.002 U         0.002 U         0.002 U           1.1.1.2.7Ertrachloroethane         mg/kg         0.004 U         0.002 U         0.002 U           1.1.1.2.7Trichloroethane         mg/kg         0.004 U         0.002 U         0.002 U           1.1.Dichloroethane         mg/kg         0.004 U         0.005 U         0.004 U           1.2.3-Trichloroethane         mg/kg         0.004 U         0.005 U         0.002 U           1.2.Dichloroethane         mg/kg         0.002 U         0.005 U         0.002 U           1.2.Dichloroethane         m	SW7471A		mg/kg	0.04 U	0.04 U	0.04 U	0 04 11
Silver         mg/kg         0.19 UJ         0.21 UJ         0.17 UJ           Thallum         mg/kg         4.7 U         1 UJ         4.3 U           1.1.1.2.Trichlorocthane         mg/kg         0.003 U         0.002 U         0.002 U           1.1.2.Trichlorocthane         mg/kg         0.004 U         0.002 U         0.002 U           1.1.1.2.Trichlorocthane         mg/kg         0.002 U         0.002 U         0.002 U           1.1.Dichlorocthane         mg/kg         0.002 U         0.002 U         0.002 U           1.1.Dichlorocthane         mg/kg         0.004 U         0.002 U         0.004 U           1.1.Dichlorocthane         mg/kg         0.004 U         0.002 U         0.004 U           1.1.Dichlorocthane         mg/kg         0.004 U         0.005 U         0.004 U           1.2.Dichloropropane         mg/kg         0.004 U         0.005 U         0.004 U           1.2.Dichloropropane         mg/kg         0.003 U         0.003 U         0.004 U           1.2.Dichloropropane         mg/kg         0.003 U         0.003 U         0.004 U           1.2.Dichloropropane         mg/kg         0.004 U         0.005 U         0.004 U           1.2.Dichloropropane         mg/kg	SW7740	Selentum	mg/kg	1.4 UJ	1.6 UJ	1.3 UJ	1.4 UJ
Thallium         mg/kg         4.7 U         1 UJ         4.3 U           1.1.1.2-Tetrachlorocthane         mg/kg         0.003 U         0.002 U         0.002 U           1.1.1.2-Trichlorocthane         mg/kg         0.004 U         0.002 U         0.002 U           1.1.2-Trichlorocthane         mg/kg         0.004 U         0.005 U         0.002 U           1.1.1-Dichlorocthane         mg/kg         0.004 U         0.005 U         0.002 U           1.1-Dichlorocthane         mg/kg         0.004 U         0.005 U         0.002 U           1.1-Dichlorocthane         mg/kg         0.004 U         0.005 U         0.002 U           1.1-Dichlorocthane         mg/kg         0.004 U         0.005 U         0.004 U           1.1-Dichlorocthane         mg/kg         0.004 U         0.005 U         0.004 U           1.1-Dichlorocthane         mg/kg         0.004 U         0.005 U         0.004 U           1.2-Dichlorocthane         mg/kg         0.004 U         0.005 U         0.004 U           1.2-Dichlorocthane         mg/kg         0.003 U         0.005 U         0.004 U           1.2-Dichlorocthane         mg/kg         0.003 U         0.003 U         0.002 U           1.2-Dichlorocthane <t< td=""><td>SW7761</td><td>Silver</td><td>mg/kg</td><td>0.19 UJ</td><td>0.21 UJ</td><td>0.17 UJ</td><td>0.19 UJ</td></t<>	SW7761	Silver	mg/kg	0.19 UJ	0.21 UJ	0.17 UJ	0.19 UJ
1.1.1.2-Tetrachlorocthane         mg/kg         0.003 U         0.0         0.002 U         0.002 U         0.003 U           1.1.1-Trichlorocthane         mg/kg         0.004 U         0.002 U         0.002 U         0.002 U           1.1.2-Trichlorocthane         mg/kg         0.004 U         0.002 U         0.002 U           1.1-Dichlorocthane         mg/kg         0.004 U         0.002 U         0.004 U           1.1-Dichlorocthane         mg/kg         0.004 U         0.002 U         0.004 U           1.1-Dichlorocthane         mg/kg         0.004 U         0.002 U         0.004 U           1.2-Dichlorocthane         mg/kg         0.004 U         0.005 U         0.004 U           1.2-Dichlorocthane         mg/kg         0.003 U         0.003 U         0.004 U           1.2-Dichlorocthane         mg/kg         0.003 U         0.003 U         0.002 U           1.2-Dichlorocthane         mg/kg         0.003 U         0.003 U         0.002 U           1.2-Dichlorocthane         mg/kg         0.003 U         0.003 U         0.002 U           1.2-Dichlorocthane         mg/kg         0.004 U         0.005 U         0.004 U           2-Chioro-1.3-butadiene         mg/kg         0.004 U         0.005 U	SW7841		mg/kg	4.7 U	1 UJ	4.3 U	4.8 U
1.1.1-Trichloroethane         mg/kg         0.004 U         0.002 U         0.002 U           1.1.2.2-Tetrachloroethane         mg/kg         0.002 U         0.002 U         0.002 U           1.1.2.4-Trichloroethane         mg/kg         0.004 U         0.002 U         0.004 U           1.1-Dichloroethane         mg/kg         0.004 U         0.002 U         0.004 U           1.1-Dichloroethane         mg/kg         0.004 U         0.005 U         0.004 U           1.1-Dichloroethane         mg/kg         0.004 U         0.005 U         0.004 U           1.2-Diromochane/s-chloropropane         mg/kg         0.003 U         0.005 U         0.004 U           1.2-Dichloroethane         mg/kg         0.003 U         0.003 U         0.002 U           1.2-Dichloropropane         mg/kg         0.003 U         0.003 U         0.002 U           1.2-Dichloropropane         mg/kg         0.003 U         0.003 U         0.002 U           1.2-Dichloropropane         mg/kg         0.002 U         0.002 U         0.002 U           2-Chloro-1.3-butadiene         mg/kg         0.002 U         0.002 U         0.002 U           Acetone         mg/kg         0.004 U         0.005 U         0.004 U           Acetone <td>SW8260B</td> <td>_+</td> <td>mg/kg</td> <td>0.003 U</td> <td>Ω0</td> <td>0.002 U</td> <td>0.003 U</td>	SW8260B	_+	mg/kg	0.003 U	Ω0	0.002 U	0.003 U
1.1.2.2-Tetrachloroethane         mg/kg         0 002 U         0.002 U         0.004 U           1.1.2-Trichloroethane         mg/kg         0.004 U         0.005 U         0.004 U           1.1-Dichloroethane         mg/kg         0.004 U         0.005 U         0.004 U           1.1-Dichloroethane         mg/kg         0.004 U         0.005 U         0.004 U           1.2.3-Trichloropropane         mg/kg         0.004 U         0.005 U         0.004 U           1.2-Dirbromo-3-chloropropane         mg/kg         0.003 U         0.004 U         0.004 U           1.2-Dirbromo-chhane (Ethylene dibromide)         mg/kg         0.003 U         0.003 U         0.002 U           1.2-Dichloroethane         mg/kg         0.003 U         0.003 U         0.002 U         0.002 U           1.2-Dichloroethane         mg/kg         0.003 U         0.003 U         0.002 U         0.002 U           1.2-Dichloroethane         mg/kg         0.002 U         0.003 U         0.002 U         0.002 U           1.2-Dichloroethane         mg/kg         0.004 U         0.002 U         0.002 U         0.004 U           2-Chloro-1,3-butadiene         mg/kg         0.004 U         0.005 U         0.004 U         0.004 U           Acetone	SW8260B	1,1,1-Trichloroethane	mg/kg	0.004 U	0.004 U	0 003 U	0.004 U
1.1.2-Trichlorocethane         mg/kg         0.004 U         0.005 U         0.004 U           1.1-Dichlorocethane         mg/kg         0.002 U         0.002 U         0.004 U           1.1-Dichlorocethane         mg/kg         0.004 U         0.005 U         0.004 U           1.2.3-Trichloropropane         mg/kg         0.004 U         0.005 U         0.004 U           1.2-Dichromo-3-chloropropane         mg/kg         0.003 U         0.003 U         0.004 U           1.2-Dichromo-thane (Ethylene dibromide)         mg/kg         0.003 U         0.003 U         0.002 U           1.2-Dichlorocethane         mg/kg         0.003 U         0.003 U         0.002 U         0.002 U           1.2-Dichlorocpropane         mg/kg         0.002 U         0.003 U         0.002 U         0.002 U           1.2-Dichlorocpropane         mg/kg         0.004 U         0.002 U         0.002 U         0.002 U           1.2-Dichloro-1,3-butadiene         mg/kg         0.004 U         0.005 U         0.004 U         0.004 U           Acetone         mg/kg         0.004 U         0.005 U         0.004 U         0.004 U           Acetone         mg/kg         0.005 U         0.004 U         0.004 U         0.004 U           Aceto	SW8260B	1,1,2,2-Tetrachloroethane	mg/kg	0 002 U	0.002 U	0.002 U	0.002 U
1,1-Dichloroethane         mg/kg         0.002 U         0.002 U         0.002 U           1,1-Dichloroethene         mg/kg         0.004 U         0.005 U         0.004 U           1,2,3-Trichloropropane         mg/kg         0.004 U         0.005 U         0.004 U           1,2-Dibromo-3-chloropropane         mg/kg         0.003 U         0.005 U         0.004 U           1,2-Dichloroethane         mg/kg         0.003 U         0.003 U         0.002 U           1,2-Dichloroethane         mg/kg         0.003 U         0.003 U         0.002 U           1,2-Dichloroethane         mg/kg         0.003 U         0.003 U         0.002 U           1,2-Dichloroethane         mg/kg         0.004 U         0.003 U         0.002 U           2-Chloro-1,3-butadiene         mg/kg         0.004 U         0.005 U         0.004 U           2-Chloro-1,3-butadiene         mg/kg         0.004 U         0.005 U         0.004 U           Acetone         mg/kg         0.008 U         0.005 U         0.004 U           Acetonitrile         mg/kg         0.036 U         0.04 U         0.034 U           Acrolein         mg/kg         0.036 U         0.04 U         0.034 U           Acrolein         mg/kg	SW8260B	1,1,2-Trichloroethane	mg/kg	0 004 U	0 000 U	0.004 U	0.005 U
1,1-Dichloroethene         mg/kg         0.004 U         0.005 U         0.004 U           1,2,3-Trichloropropane         mg/kg         0.004 U         0.005 U         0.004 U           1,2-Dibromo-3-chloropropane         mg/kg         0.003 U         0.005 U         0.004 U           1,2-Dibromocthane (Ethylene dibromide)         mg/kg         0.003 U         0.002 U         0.002 U           1,2-Dichlorocthane         mg/kg         0.003 U         0.003 U         0.002 U         0.002 U           1,2-Dichloropropane         mg/kg         0.004 U         0.003 U         0.002 U         0.002 U           2-Chloro-1,3-butadiene         mg/kg         0.004 U         0.005 U         0.004 U         0.004 U           Acetone         mg/kg         0.004 U         0.005 U         0.004 U         0.004 U           Acetonitile         mg/kg         0.036 U         0.04 U         0.034 U         0.034 U           Acrolein         mg/kg         0.036 U         0.01 U         0.034 U         0.034 U	SW8260B	_	mg/kg	0.002 U	0 002 U	0.002 U	0.002 U
1,2,3-Trichloropropane         mg/kg         0.004 U         0.005 U         0.004 U           1,2-Dibromo-3-chloropropane         mg/kg         0.003 U         0.003 U         0.004 U           1,2-Dibromoethane (Ethylene dibromide)         mg/kg         0.003 U         0.003 U         0.002 U           1,2-Dichloropropane         mg/kg         0.002 U         0.002 U         0.002 U           2-Chloro-1,3-butadiene         mg/kg         0.004 U         0.005 U         0.004 U           2-Hexanone         mg/kg         0.004 U         0.005 U         0.004 U           Acetone         mg/kg         0.008 U         0.005 U         0.004 U           Acetone         mg/kg         0.036 U         0.004 U         0.004 U           Acrolein         mg/kg         0.036 U         0.004 U         0.004 U           Acrolein         mg/kg         0.036 U         0.01 U         0.034 U           Acrolein         mg/kg         0.036 U         0.1 U         0.034 U	SW8260B		mg/kg	0.004 U	O 005 U	0.004 U	0.005 U
1,2-Dibromo-3-chloropropane         mg/kg         0.004 U         0.005 U         0.004 U           1,2-Dibromoethane (Ethylene dibromide)         mg/kg         0.003 U         0.003 U         0.002 U           1,2-Dichlorocethane         mg/kg         0.002 U         0.002 U         0.002 U           1,2-Dichloropropane         mg/kg         0.004 U         0.002 U         0.002 U           2-Chloro-1,3-butadiene         mg/kg         0.004 U         0.005 U         0.004 U           Acetone         mg/kg         0.004 U         0.005 U         0.004 U           Acetone         mg/kg         0.036 U         0.005 U         0.004 U           Acetonitrile         mg/kg         0.036 U         0.004 U         0.004 U           Acrolein         mg/kg         0.036 U         0.004 U         0.004 U           Acrolein         mg/kg         0.036 U         0.004 U         0.004 U	SW8260B	1,2,3-Trichloropropane	mg/kg	0.004 U	0.005 U	0.004 U	0.005 U
1,2-Dibromoethane (Ethylene dibromide)         mg/kg         0.003 U         0.003 U         0.002 U           1,2-Dichlorocethane         mg/kg         0.002 U         0.002 U         0.002 U           1,2-Dichloropropane         mg/kg         0.004 U         0.002 U         0.002 U           2-Chloro-1,3-butadiene         mg/kg         0.004 U         0.005 U         0.004 U           Acetone         mg/kg         0.004 U         0.005 U         0.004 U           Acetone         mg/kg         0.036 U         0.004 U         0.004 U           Acetonitrile         mg/kg         0.036 U         0.034 U         0.004 U           Acrolein         mg/kg         0.036 U         0.034 U         0.034 U           Acrolein         mg/kg         0.036 U         0.034 U         0.034 U	т	1,2-Dibromo-3-chloropropane	mg/kg	0.004 U	0.005 ປ	0.004 U	0.005 U
1,2-Dichloroethane         mg/kg         0.003 U         0.002 U         0.002 U           1,2-Dichloropropane         mg/kg         0.002 U         0.002 U         0.002 U           2-Chloro-1,3-butadiene         mg/kg         0.004 U         0.005 U         0.004 U           2-Hexanone         mg/kg         0.004 U         0.005 U         0.004 U           Aceton         mg/kg         0.008 U         0.005 U         0.004 U           Acetonitrile         mg/kg         0.036 U         0.034 U         0.004 U           Acrolein         mg/kg         0.036 U         0.034 U         0.034 U           Acrolein         mg/kg         0.036 U         0.004 U         0.034 U		1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.003 U	0.003 U	0.002 U	0.003 U
1,2-Dictiloropropane         mg/kg         0.002 U         0.002 U         0.002 U           2-Chloro-1,3-butadiene         mg/kg         0.004 U         0.005 U         0.004 U           2-Hexanone         mg/kg         0.004 U         0.005 U         0.004 U           Acetone         mg/kg         0.008 U         0.005 U         0.004 U           Acetonitrile         mg/kg         0.036 U         0.034 U         0.034 U           Acrolein         mg/kg         0.089 U         0.1 U         0.084 U           Acrollomitrile         mg/kg         0.036 U         0.034 U         0.034 U		1,2-Dichloroethane	mg/kg	0.003 U	0.003 U	0.002 U	O 003 U
2-Chloro-1,3-butacliene         mg/kg         0.004 U         0.005 U         0.004 U         0.004 U           2-Hexanone         mg/kg         0.004 U         0.005 U         0.004 U         0.004 U           Acetonic         mg/kg         0.036 U         0.034 U         0.034 U         0.034 U           Acrolein         mg/kg         0.089 U         0.1 U         0.084 U         0.084 U           Acroloinic         mg/kg         0.035 U         0.04 U         0.034 U         0.034 U	$\neg$	1,2-Dichloropropane	mg/kg	0.002 U	0.002 U	0.002 U	0 002 U
2-Hexanone         mg/kg         0.004 U         0.005 U         0.004 U           Acetone         mg/kg         0.008 U         0.005 U         0.004 U           Acetonitrile         mg/kg         0.036 U         0.04 U         0.034 U           Acrolein         mg/kg         0.089 U         0.1 U         0.084 U           Acrylonitrile         mg/kg         0.036 U         0.04 U         0.034 U		2-Chloro-1,3-butadiene	mg/kg	0.004 U	0.005 ປ	0.004 U	0.005 U
Acetone         mg/kg         0 008 U         0 005 U         0.004 U           Acetonitrile         mg/kg         0.036 U         0.04 U         0.034 U           Acrolein         mg/kg         0 089 U         0.1 U         0.084 U           Acrylonitrile         mg/kg         0.036 U         0.04 U         0.034 U		2-Hexanone	mg/kg	0.004 U	0.005 U	0.004 U	0.005 U
Acrolein         mg/kg         0.036 U         0.04 U         0.034 U           Acrolein         mg/kg         0.089 U         0.1 U         0.084 U           Acrylonitrile         mg/kg         0.036 U         0.04 U         0.034 U		Acetone	mg/kg	0 008 U	U 200 0	0.004 U	0.005 U
Acrolein $mg/kg$ 0.089 U         0.1 U         0.084 U           Acrylonitrile $mg/kg$ 0.036 U         0.04 U         0.034 U	Т	Acetonitrile	mg/kg	0.036 U	0.04 U	0.034 U	0.04 U
Mcrylonitrile   mg/kg   0.036 U   0.04 U   0.034 U	т	Acrolein	mg/kg	0 089 U	0.1 U	0.084 U	0.1 U
		Acrylonitrile	mg/kg	0.036 U	0.04 U	0.034 U	0 04 U

,			BHGLAOC1903 00 ft	BHGLAOC1903 00 ft	BHGLAOC1903 05 ft	BHGLAOC1904 00 ft
Method	Analyte	Unit	2000-05-15	/ 2000-05-15 Dup,	2000-05-15	2000-05-15
SW8260B	Allyl chloride (3-Chloropropene)	mg/kg	0.009 U	0.01 U	0.008 U	0 01 U
SW8260B	Benzene	mg/kg	0.002 U	0 000 U	0 000 U	0.002 U
SW8260B	Bromodichloromethane	mg/kg	0.004 U	0.004 U	0.003 U	0.004 U
SW8260B	Bromoform	mg/kg	0.004 U	0.005 U	0.004 U	0.005 U
SW8260B	Bromomethane	mg/kg	0.004 U	0.005 U	0.004 U	0.005 U
SW8260B	Carbon disulfide	mg/kg	0.004 U	0.005 U	0.004 U	0.005 U
SW8260B	Carbon tetrachloride	mg/kg	0.004 U	0 000 U	0.004 U	0 005 U
SW8260B	Chlorobenzene	mg/kg	0 005 U	0 005 U	0.002 U	0 002 U
SW8260B	Chloroethane	mg/kg	0.004 U	0.005 U	0.004 U	0.005
SW8260B	Chloroform	mg/kg	0.002 U	0.002 U	0.002 U	0.002 U
SW8260B	Chloromethane	mg/kg	0 004 U	O 500 O	0.004 U	0 002 U
SW8260B	cis-1,2-Dichloroethene	mg/kg	0 004 U	0.005 U	0.004 U	0.005 U
SW8260B	cis-1,3-Dichloropropene	mg/kg	0.004 U	0.005 U	0.004 U	0.005 U
SW8260B	Dibromochloromethane	mg/kg	0.003 U	U 600.0	0.002 U	0.003 U
SW8260B	Dibromomethane	mg/kg	0.004 U	0.005 U	0.004 U	0.005 U
SW8260B	Dichlorodifluoromethane	mg/kg	0.004 U	0.005 R	0.004 U	0.005 R
SW8260B	Ethyl methacrylate	mg/kg	0 004 U	0.005 U	O 400 O	0.005 U
SW8260B	Ethylbenzene	mg/kg	0.003 U	0.003 U	0 000 U	0.003 U
SW8260B	Iodomethane (Methyl iodide)	mg/kg	0.004 U	0.005 U	0.004 U	0.005 U
SW8260B	Isobutanol	mg/kg	0 18 U	0 2 U	0.17 U	0.2 U
SW8260B	m,p-Xylene (sum of isomers)	mg/kg	0.004 U	0 002 U	0.004 U	0 005 U
SW8260B	Methyl ethyl ketone (2-Butanone)	mg/kg	0.004 U	0.005 U	0.004 U	0.005 U
SW8260B	Methyl isobutyl ketone (4-Methyl-2-pentanone)	mg/kg	0.004 U	0.005 U	0.004 U	0.005 U
SW8260B	Methyl methacrylate	mg/kg	0 004 U	0.005 U	0.004 U	0.005 U
SW8260B	Methylacrylonitrile	mg/kg	0 004 U	0.005 U	0.004 U	0.005 U
SW8260B	Methylene chloride	mg/kg	0.002 U	U 600.0	0.002 U	0.002 U
SW8260B	0-Xylene (1,2-Dimethylbenzene)	mg/kg	0 004 U	0.005 U	0 004 U	0 005 U
SW8260B	Pentachloroethane	mg/kg	0.004 U	0.005 U	0 004 U	0.005 U
SW8260B	Propane nitrile (Propionitrile)	mg/kg	0 018 U	0.02 U	0.017 U	0.02 U
SW8260B	Styrene	mg/kg	0.002 U	0 002 U	0.002 U	0.002 U
SW8260B	Tert-Butyl Methyl Ether	mg/kg	0.004 U	0.005 U	0.004 U	0.005 U
SW8260B	Tetrachloroethene (PCE)	mg/kg	0 004 U	0.005 U	0 004 U	0.005 U
SW8260B	Toluene	mg/kg	0 004 U	0.005 U	0 004 U	0 005 U
SW8260B	Trans-1,2-Dichloroethene	mg/kg	0.003 U	0.003 U	0.002 U	0.003 U



			BHGLAOC1903 no fr	BHCJ AOC1903 to 6	BUCI AOC1003 02 6	La do topico a Torio
Method	Analyte	Unit	2000-05-15	2000-05-15 Dun	2000-05-15	2000-05-15
SW8260B	Trans-1,3-Dichloropropene	mg/kg	0.004 U	0.005 U	0.004 U	11 500 0
SW8260B	Trans-1,4-Dichloro-2-Butene	mg/kg	0.004 U	0 000 U	0.004 U	0.005 U
SW8260B	Trichloroethene (TCE)	mg/kg	0.004 U	0.005 U	0.005	0 005 J
SW8260B	Trichlorofluoromethane	mg/kg	0.004 U	0.004 U	0 003 U	0.004 U
90078WS	Vinyl acetate	mg/kg	0.004 U	0 005 U	0 004 U	0.005 U
SW8260B	Vinyl chloride	mg/kg	0 004 U	0.005 U	0.004 U	0.005 U
SW82/0C	1,2,4,5-Tetrachlorobenzene	mg/kg	0 35 U	0.37 U	0.36 U	0.37 U
SW8270C	1,2,4-Trichlorobenzene	mg/kg	0 35 U	0 37 U	0 36 U	0,37 U
SW82/0C	1,2-Dichlorobenzene	mg/kg	0.35 U	0.37 U	0.36 U	0 37 U
SW8270C	1,3,5-Trinitrobenzene	mg/kg	1.4 U	1.5 U	1.5 U	1.5 U
SW82/0C	1,3-Dichlorobenzene	mg/kg	0.35 U	0.37 U	0 36 U	0.37 U
SW82/0C	1,3-Dintrobenzene	mg/kg	0.71 U	0.74 U	0 73 U	0.75 U
SW82/0C	1,4-Dichlorobenzene	mg/kg	0 35 U	0.37 U	0.36 U	0.37 U
Sw82/0C	1,4-Dioxane (p-Dioxane)	mg/kg	1.4 U	1 5 U	150	1.5 U
$\overline{}$	1,4-Naphthoquinone	mg/kg	1.8 R	19R	18R	1.9 R
	1-Naphthylamine	mg/kg	0 71 U	0.74 U	0 73 U	0.75 U
SW82/0C	2,2 -Oxybis(1-chloropropane)	mg/kg	0.35 U	0 37 U	0.36 U	0.37 U
SW82/0C	SW6Z/UC 2,3,4,0-1 etrachlorophenol	mg/kg	0.35 U	0.37 Ü	0.36 U	0.37 U
	2,4,3-1 richlorophenol	mg/kg	1.8 U	1.9 U	18U	1.9 U
2W82/0C	2,4,6- I richlorophenol	mg/kg	0.35 U	0 37 U	0.36 U	0 37 U
SW82/0C	SW82/0C 2,4-Dichlorophenol	mg/kg	0.35 U	0 37 U	0 36 U	0.37 U
SW82/0C	SW82/UC 2,4-Dimethylphenol	mg/kg	0.35 U	0.37 U	0.36 U	0.37 U
SW82/0C	SW82/0C 2,4-Dinitrophenol	mg/kg	1.8 U	19 U	1.8 U	1.9 U
SW82/0C	2,4-Dinitrotoluene	mg/kg	0.35 U	0.37 U	0 36 U	0.37 U
SW82/0C	SW 82/UC 2,0-Dichlorophenol	mg/kg	0.35 U	0.37 U	0.36 U	0 37 U
SW82/0C	SW82/UC 2,0-Dinitrototuene	mg/kg	0.35 U	0.37 U	0.36 U	0.37 U
	2-Acetylaminotluorene	mg/kg	0.71 U	0.74 U	0.73 U	0.75 U
	2-Aminonaphthalene (beta-Naphthylamine)	mg/kg	0 71 U	0.74 U	0.73 U	0.75 U
SW82/0C	2-Cnloronaphthalene	mg/kg	0 35 U	0 37 U	0.36 U	0.37 U
$\overline{}$	2-Criorophenol	mg/kg	0.35 U	0.37 U	0.36 U	0.37 U
	2-Methylnaphthalene	mg/kg	0 35 U	0.37 U	0 36 U	0.37 U
SW82/0C	2-Methylphenol (o-Cresol)	mg/kg	0.35 U	0.37 U	0.36 U	0.37 U
SW8270C	SW82/0C 2-Nitroaniline	mg/kg	1.8 U	1.9 U	1.8 U	190
2W82/UC	2-initropnenoi	mg/kg	0.35 U	0.37 U	0.36 U	0.37 U

Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

			BHGLAOC1903 00 ft	BHGLAOC1903 00 ft	BHGLAOC1903 05 ft	BHGI, AOC1904 00 ft
Method	Analyte	Unit	2000-05-15	2000-05-15 Dup	2000-05-15	2000-05-15
SW8270C	2-Picoline (alpha-Picoline)	mg/kg	0.35 U	0.37 U	0.36 U	0.37 U
SW8270C	3,3'-Dichlorohenzidine	mg/kg	0.71 U	0 74 U	U £7 0	0 75 U
SW8270C	3,3'-Dimethylbenzidine	mg/kg	1 8 U	1.9 U	1.8 U	1.9 U
SW8270C	3-Methylcholanthrene	mg/kg	0 35 U	0.37 U	0 36 U	0 37 U
SW8270C	3-Nitroaniline	mg/kg	1.8 U	1 9 U	1.8 U	1.9 U
SW8270C	4,6-Dinitro-2-methylphenol	mg/kg	1.8 U	1.9 U	1.8 U	U 6 T
SW8270C	SW8270C 4-Aminobiphenyl (4-Biphenylamine)	mg/kg	0 11 U	0.74 U	0.73 U	0.75 U
SW8270C	SW8270C 4-Bromophenyl phenyl ether	mg/kg	0.35 U	0.37 U	0.36 U	0.37 U
SW8270C	SW8270C 4-Chloro-3-methylphenol	mg/kg	0.35 U	0.37 U	0.36 U	0 37 U
SW8270C	SW8270C 4-Chloroanline	mg/kg	0.35 U	0 37 U	0.36 U	0.37 U
SW8270C	SW8270C 4-Chlorophenyl phenyl ether	mg/kg	0.35 U	0.37 U	0.36 U	0.37 U
SW8270C	4-Methylphenol (P-Cresol)	mg/kg	NA	NA	NA	VV
SW8270C	4-Nitroaniline	mg/kg	1 8 U	1.9 U	1.8 U	1.9 U
SW8270C	4-Nitrophenol	ga/gm	1 8 U	U 6.1	1.8 U	1.9 U
SW8270C	4-Nitroquinoline-1-oxide	mg/kg	1.8 R	1 9 R	1.8 R	1.9 R
SW8270C	5-Nitro-o-toluidine	mg/kg	0 17 U	0.74 U	0 £2 O	0.75 U
SW8270C	7,12-Dimethylbenzo(a)anthracene	mg/kg	0.71 U	0.74 U	0.73 U	U 27 U
SW8270C	Acenaphthene	mg/kg	0.35 U	0.37 U	0 36 U	0 37 U
SW8270C	Acenaphthylene	mg/kg	0.35 U	0.37 U	0.36 U	0 37 U
SW8270C	Acetophenone	mg/kg	0.35 U	0.37 U	0.36 U	0.37 U
SW8270C	alpha, alpha-Dimethylphenethylamine	mg/kg	1.8 U	1.9 U	18U	1.9 U
SW8270C	Anılıne (Phenylamıne, Amınobenzene)	mg/kg	0.35 U	0 37 U	0.36 U	0 37 U
SW8270C	SW8270C Anthracene	mg/kg	0.35 U	0 37 U	0 36 U	0.37 U
SW8270C	Aramite (total)	mg/kg	0.71 U	0.74 U	0.73 U	0.75 U
SW8270C	Benzo(a)anthracene	mg/kg	0.35 U	0.37 U	0.36 U	0.37 U
SW8270C	Benzo(a)pyrene	mg/kg	0.35 U	0.37 U	0.36 U	0.37 U
SW8270C	Benzo(b)fluoranthene	mg/kg	0.35 U	0.37 U	0.36 U	0.37 U
SW8270C	Benzo(g,h,1)perylene	mg/kg	0 35 U	0.37 U	0 36 U	0.37 U
SW8270C		mg/kg	0.35 U	0.37 U	0.36 U	0.37 U
SW8270C	Benzoic acid	mg/kg	1.8 U	1.9 U	1.8 U	19 U
SW8270C	Benzyl alcohol	mg/kg	0.35 U	0.37 U	0.36 U	0.37 U
SW8270C	Benzyl butyl phthalate	mg/kg	0 35 U	0.37 U	0.36 U	0 37 U
SW8270C	bis(2-Chloroethoxy)methane	mg/kg	0 35 U	0.37 U	0.36 U	0.37 U



Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

			BHGLAOC1903 00 ft	BHGLAOC1903 00 ft	BHGLAOC1903 05 ft	BHGLAOC1904 00 ft
Method	$\neg$	Unit	2000-05-15	2000-05-15 Dup	2000-05-15	2000-05-15
SW8270C	bis(2-Chloroethyl)ether (2-Chloroethyl ether)	mg/kg	0.35 U	0.37 U	0 36 U	0.37 U
SW8270C	bis(2-Ethylhexyl)phthalate	mg/kg	0.35 U	0 37 U	0.36 U	0.37 U
SW8270C	_	mg/kg	0 35 U	0.37 U	0 36 U	0 37 U
SW8270C	_	mg/kg	0.35 U	0.37 U	0.36 U	0.37 U
SW8270C		mg/kg	0.35 U	0.37 U	0.36 U	0.37 U
SW8270C		mg/kg	0.35 U	0 37 U	0 36 U	0.37 U
SW8270C		mg/kg	0.35 U	0.37 U	0.36 U	0.37 U
SW8270C	Dibenzofuran	mg/kg	0.35 U	Ω 22 Ω	0.36 U	0.37 U
SW8270C	Diethyl phthalate	mg/kg	0 35 U	0.37 U	0 36 U	0.37 U
SW8270C	Dimethyl phthalate	mg/kg	0 35 U	0.37 U	0 36 U	0.37 U
SW8270C	SW8270C Di-n-butyl phthalate	mg/kg	0.35 U	0.37 U	0.36 U	0.37 U
SW8270C		mg/kg	0.35 U	Ω 22 Ω	0.36 U	0.37 U
SW8270C	Dinoseb	mg/kg	0.71 U	0 74 U	0.73 U	0.75 U
SW82/0C	-	mg/kg	0.35 U	Ω 25 Ω	0.36 U	0.37 U
SW8270C	Ethyl methanesulfonate	mg/kg	0 35 U	0.37 U	0 36 U	0.37 U
SW8270C	SW8270C Fluoranthene	mg/kg	0 35 U	0.37 U	0 36 U	0.37 U
SW8270C Fluorene	Fluorene	mg/kg	0.35 U	0.37 U	0 36 U	0.37 U
SW8270C	SW8270C Hexachlorobenzene	mg/kg	0.35 U	0.37 U	0.36 U	0.37 U
SW8270C	SW8270C Hexachlorobutadiene	mg/kg	0 35 U	0 37 U	0.36 U	0.37 U
SW8270C	SW8270C Hexachlorocyclopentadiene	mg/kg	0 35 U	0 37 U	0.36 U	0.37 U
SW8270C	SW8270C Hexachlorocthane	mg/kg	0.35 U	0.37 U	0 36 U	0.37 U
SW82/0C	SW82/UC Hexachlorophene	mg/kg	5.3 R	5.6 R	5.5 R	5.6 R
SW8270C	SW8270C Hexachloropropene	mg/kg	1.8 U	1.9 U	1.8 U	1.9 U
SW8270C	SW8270C Indeno(1,2,3-c,d)pyrene	mg/kg	0.35 U	0.37 U	0 36 U	0 37 U
SW8270C	SW8270C Isophorone	mg/kg	0 35 U	0 37 U	0.36 U	0.37 U
SW8270C Isosafrole	Isosafrole	mg/kg	0 35 U	0.37 U	0.36 U	0.37 U
SW8270C	SW8270C Methapyrilene	mg/kg	1.8 U	1,9 U	1.8 U	19 U
SW8270C	SW8270C Methyl methanesulfonate	mg/kg	0.71 U	0.74 U	0.73 U	0.75 U
SW8270C	SW8270C Naphthalene	mg/kg	0 35 U	0.37 U	0.36 U	0.37 U
SW8270C	SW8270C Nitrobenzene	mg/kg	0.35 U	0.37 U	0.36 U	0.37 U
SW8270C	SW8270C N-Nitrosodiethylamine	mg/kg	0.71 U	0.74 U	0.73 U	0.75 U
SW8270C	SW8270C N-Nitrosodimethylamine	mg/kg	0.35 U	0.37 U	0.36 U	0.37 U
SW8270C	SW8270C N-Nitrosodi-n-butylamine	mg/kg	0.35 U	0.37 U	0.36 U	0.37 U
SW82/0C	N-Nitrosodi-n-propylamine	mg/kg	0.35 U	0.37 U	0.36 U	0.37 U

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Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

		*	BHGLAOC1903 00 ft	BHGLAOC1903 00 ft	BHGLAOC1903 05 ft	BHGLAOC1904 00 ft
Method	Analyte	Unit	2000-05-15	2000-05-15 Dup	2000-05-15	2000-05-15
SW8270C	SW8270C N-Nitrosodiphenylamine	mg/kg	0 35 U	0.37 U	0 36 U	0.37 U
SW8270C	SW8270C N-Nitrosomethylethylamine	mg/kg	0.71 U	0.74 U	0.73 U	0 75 U
SW8270C	SW8270C N-Nitrosomorpholine	mg/kg	0.71 U	0.74 U	0.73 U	0 75 U
SW8270C	SW8270C N-Nitrosopiperidine	mg/kg	0.35 U	0.37 U	0.36 U	0 37 U
SW8270C	SW8270C N-Nitrosopyrrolidine	mg/kg	18U	U 6.1	1.8 U	U 6.1
SW8270C	SW8270C o-Toluidine	mg/kg	0 35 U	0.37 U	0.36 U	0.37 U
SW8270C	SW8270C p-Dimethylaminoazobenzene	mg/kg	0 71 U	0 74 U	0.73 U	0.75 U
SW8270C	SW8270C Pentachlorobenzene	mg/kg	0.35 U	0.37 U	0.36 U	0.37 U
SW8270C	SW8270C Pentachioronitrobenzene	mg/kg	0.35 U	0.37 U	0.36 U	0.37 U
SW8270C	SW8270C Pentachlorophenol	mg/kg	1.8 U	1.9 U	Ω 8.1	U 6.1
SW8270C	SW8270C Phenacetin	mg/kg	U 17 U	0.74 U	0.73 U	0.75 U
SW8270C	SW8270C Phenanthrene	mg/kg	0.35 U	0.37 U	0 36 U	0.37 U
SW8270C Phenol	Phenol	mg/kg	0.35 U	0.37 U	0.36 U	0.37 U
SW8270C	SW8270C p-Phenylenediamine	mg/kg	1.4 U	150	U 2.1	1.5 U
SW8270C	SW8270C Pronamide	mg/kg	0.71 U	0.74 U	0.73 U	0.75 U
SW8270C Pyrene	Pyrene	mg/kg	0.35 U	0.37 U	Ω 9ε'0	0.37 U
SW8270C Pyridine	Pyridine	mg/kg	0.71 R	0.74 R	0.73 R	0.75 R
SW8270C  Safrole	Safrole	mg/kg	0.35 U	0.37 U	0.36 U	0.37 U



Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

2000-05-15         2001-08-20           2.4 F         4.9           59.1 J         78.1           6.45 J         0.92           0.23 F         0.92           0.23 F         0.92           0.23 F         5.3 F           5 1 F         16.3           8 6 JJ         11.5           8 6 JJ         11.5           8 6 JJ         17.0           29.8 J         31 5           16.2 F         27.3 U           0.47 UJ         0.03 U           0.19 UJ         0.19 UJ           0.19 UJ         0.008 U           0.002 U         0.0000 U           0.002 U         0.0000 U           0.004 U         0.0001 U           0.004 U         0.0001 U           0.002 U         0.0001 U           0.002 U         0.0001 U           0.002 U         0.0001 U           0.002 U         0.0000 U	, ,			BHGLAOC1904 05 ft	BHGLAOC1905 00 ft	BHGLAOC1905 05 ft	BHGLAOC1905 10 ft
Ansenic         mg/kg         2.4 F         4.9           Barrum         mg/kg         59.1 J         78.1           Barrum         mg/kg         0.23 F         0.022           Cadmun         mg/kg         0.23 F         0.088 U           Chromium, total         mg/kg         3.1 F         5.3 F           Cobper         mg/kg         5.1 F         1.0.9           Nickel         mg/kg         8.7 J         1.1.5           Antimony         mg/kg         1.6.2 F         2.7.3 U           Antimony         mg/kg         0.47 UJ         0.203 U           Meccury         mg/kg         0.03 U         0.0066 U           Selentium         mg/kg         0.03 U         0.0066 U           Int.1-Trichlorocethane         mg/kg         0.02 U         0.0066 U           1.1.1-Trichlorocethane         mg/kg         0.002 U         0.0000 U           1.1.1-Trichlorocethane         mg/kg         0.002 U         0.0000 U           1.1.1-Defolorocethane	Method	Analyte	Unit	2000-05-15	2001-08-20	2001-08-20	2001-08-20
Bartunn         mg/kg         59.1 J         78.1           Beryllunn         mg/kg         0.45.1         0.92           Cadmunn         ng/kg         0.13.F         0.92           Cadmunn         ng/kg         11.8 J         16.3           Cobatt         ng/kg         3.7 F         10.9           Nickel         ng/kg         8.7 J         11.7 U           Nickel         ng/kg         8.6 UJ         1.7 U           Nickel         ng/kg         8.6 UJ         1.7 U           Anandum         ng/kg         1.6.2 F         23.3 U           Antimory         ng/kg         0.39 U         1.7 U           Antimory         ng/kg         0.19 UJ         0.19 UJ           Selenium         ng/kg         0.19 UJ         0.19 UJ           Selenium         ng/kg         0.03 U         0.000 U           Selenium         ng/kg         0.03 U		Arsenic	mg/kg	2,4 F	4.9	3.9 F	5.2
Reryllum         mg/kg         0.45 J         0.92           Cadentum         mg/kg         1.3 F         1.6 3           Cobper         mg/kg         3 F         1.6 3           Copper         mg/kg         3 I F         1.0 9           Noclel         mg/kg         8 7 J         1.1 5           In         mg/kg         8 7 J         1.1 5           In         mg/kg         8 7 J         1.1 5           Aumdum         mg/kg         8 7 J         1.1 7 U           Aumon         mg/kg         1.6 2 F         2.7 3 U           Autimony         mg/kg         6.4 J         1.7 0           Actimon         mg/kg         6.4 J         1.7 U           Mercury         mg/kg         6.4 J         1.7 U           Mercury         mg/kg         6.4 J         1.7 U           Selenium         mg/kg         0.03 U         0.0060 U           Selenium         mg/kg         0.10 U         0.0060 U           I.1.1.2.2.trachlorocthane         mg/kg         0.002 U         0.0060 U           I.1.1.2.2.frachlorocthane         mg/kg         0.002 U         0.0000 U           I.1.2.4.trichlorocthane         mg/kg		Barium	mg/kg	59.1 J	78.1	76.2	47.4
Cadmunn         mg/kg         0.23 F         0.088 U           Cobalt         ng/kg         31 F         5.3 F           Copper         mg/kg         51 F         10.9           Nickel         mg/kg         51 F         10.9           Nickel         mg/kg         8 7 J         11.5           Nickel         mg/kg         8 6 UJ         1.7 U           Nickel         mg/kg         29.8 J         31.5           Zinc         mg/kg         16.2 F         27.3 U           Antimony         mg/kg         16.2 F         27.3 U           Lead         mg/kg         0.47 UJ         0.23 UJ           Selenium         mg/kg         0.47 UJ         0.08 UJ           Selenium         mg/kg         0.19 UJ         0.00 U           Selenium         mg/kg         0.00 U         0.00 U           Li.1.2-Terrachlorocethane         mg/kg         0.00 U         0.00 U           Li.1.1.7-Tricklorocethane         mg/kg         0.00 U         0.00 U           Li.1.1.1.1.2-Terrachlorocethane         mg/kg         0.00 U         0.00 U           Li.1.1.2-Terrachlorocethane         mg/kg         0.00 U         0.00 U           Li.1.1.	П	Beryllıum	mg/kg	0.45 J	0.92	0 63	0.55
Chronium, total         mg/kg         11.8 J         16.3           Cobalt         mg/kg         3 F         5.3 F           Copper         mg/kg         8.7 J         11.5           Nickel         mg/kg         8.7 J         11.5           Inn         mg/kg         8.6 UJ         1.7 U           Varadum         mg/kg         16.2 F         27.3 U           Varadum         mg/kg         0.47 UJ         0.23 UJ           Lad         mg/kg         0.47 UJ         0.23 UJ           Antimony         mg/kg         0.47 UJ         0.23 UJ           Mercury         mg/kg         0.47 UJ         0.23 UJ           Mercury         mg/kg         0.19 UJ         0.08 UJ           Selenium         mg/kg         0.19 UJ         0.08 UJ           Selenium         mg/kg         0.002 U         0.008 UJ           Sulver         mg/kg         0.002 U         0.000 U           1.1.1.2.7-Tertachlorocthane         mg/kg         0.002 U         0.000 U           1.1.1.2.7-Tertachlorocthane         mg/kg         0.002 U         0.000 U           1.1.1.2.7-Tertachlorocthane         mg/kg         0.004 U         0.001 U <td< td=""><td></td><td>Cadmum</td><td>mg/kg</td><td>0.23 F</td><td>0 088 U</td><td>0.085 U</td><td>0.075 U</td></td<>		Cadmum	mg/kg	0.23 F	0 088 U	0.085 U	0.075 U
Cobalt         ng/kg         3 F         5.3 F           Copper         mg/kg         8.7 J         1.0.9           Nickel         1.1.5         1.1.5           Tin         mg/kg         8.7 J         1.1.5           Zinc         mg/kg         2.9.8 J         31.5           Zinc         mg/kg         1.6.2 F         27.3 U           Antimony         mg/kg         0.47 UJ         0.23 UJ           Lead         mg/kg         0.47 UJ         0.23 UJ           Selverium         mg/kg         0.03 U         0.0066 U           Selverium         mg/kg         0.19 UJ         0.19 UJ           Selverium         mg/kg         0.02 U         0.0066 U           Silverium         mg/kg         0.02 U         0.0066 U           Silverium         mg/kg         0.02 U         0.0066 U           1.1.1-Trickhorocthane         mg/kg         0.02 U         0.007 U           1.1.1-Trickhorocthane         mg/kg         0.002 U         0.000 U           1.1.1-Trickhorocthane         mg/kg         0.002 U         0.001 U           1.1.2-Dichlorocthane         mg/kg         0.002 U         0.001 U           1.1.2-Dichlorocthane	T	Chromium, total	mg/kg	11.8 J	163	12.3	11.8
Copper         mg/kg         \$1 F         10.9           Nickel         mg/kg         8.7 J         11.5           Nickel         mg/kg         8.6 UJ         1.7 U           Varadum         mg/kg         29.8 J         31.5           Zine         Antimory         mg/kg         16.2 F         27.3 U           Antimory         mg/kg         0.47 UJ         0.23 UJ           Lead         mg/kg         0.47 UJ         0.13 UJ           Sclenium         mg/kg         0.19 UJ         0.006 U           Sclenium         mg/kg         0.19 UJ         0.10 UJ           Sclenium         mg/kg         0.19 UJ         0.10 UJ           Sclenium         mg/kg         0.19 UJ         0.10 UJ           Sclenium         mg/kg         0.02 U         0.000 U           Li.1Trickhorochane         mg/kg         0.002 U         0.000 U           Li.1Trickhorochane         mg/kg         0.002 U         0.000 U           Li.1Drichlorochane         mg/kg         0.002 U         0.000 U           Li.1Drichlorochane         mg/kg         0.002 U         0.000 U           Li.2-Drichlorochane         mg/kg         0.002 U         0.000 U		Cobalt	mg/kg	3 F	5.3 F	2 F	2.9 F
Nickel         mg/kg         8.7 J         11.5           Tan         mg/kg         8.6 JJ         1.7 U           Vandum         mg/kg         29.8 J         31.5           Zinc         20.8 J         31.5         31.5           Antimony         mg/kg         0.47 UJ         0.23 UJ           Lead         mg/kg         0.47 UJ         0.23 UJ           Mercury         mg/kg         0.03 U         0.0066 U           Selenium         mg/kg         0.19 UJ         0.18 UJ           Selver         mg/kg         0.19 UJ         0.006 U           Li.1Tertachlorocthane         mg/kg         0.02 U         0.000 U           Li.1Trichlorocthane         mg/kg         0.004 U         0.000 U           Li.1Dichlorocthane         mg/kg         0.004 U         0.000 U           Li.1Dichlorocthane         mg/kg         0.004 U         0.001 U           Li.1Dichlorocthane         mg/kg         0.002 U         0.000 U           Li.1Dichlorocthane         mg/kg         0.002 U         0.001 U           Li.2Dichlorocthane         mg/kg         0.002 U         0.001 U           Li.2Dichlorocthane         mg/kg         0.002 U <th< td=""><td></td><td>Copper</td><td>mg/kg</td><td>5 1 F</td><td>10.9</td><td>5.2 F</td><td>5.4 F</td></th<>		Copper	mg/kg	5 1 F	10.9	5.2 F	5.4 F
Tin         mgkg         8 6 UJ         1.7 U           Vanadum         mgkg         29.8 J         1.7 U           Zinc         mgkg         16.2 F         27.3 U           Antimony         mgkg         0.4 UJ         0.20 UJ           Lead         mgkg         0.40 UJ         0.006 U           Selenium         mgkg         0.19 UJ         0.006 U           Schonium         mgkg         0.19 UJ         0.19 UJ           Schonium         mgkg         0.19 UJ         0.000 U           Li Li Trichlorocthane         mgkg         0.019 UJ         0.000 U           Li Li Trichlorocthane         mgkg         0.002 U         0.000 U           Li Li Trichlorocthane         mgkg         0.002 U         0.000 U           Li Li Dichlorocthane         mgkg         0.002 U         0.000 U           Li Li Dichlorocthane         mgkg         0.002 U         0.001 U           Li Li Dichlorocthane         mgkg         0.002 U         0.001 U           Li Li Dichlorocthane         mgkg         0.002 U         0.002 U           Li Li Dichlorocthane         mgkg         0.002 U         0.002 U           Li Li Dichlorocthane         mgkg         0.002 U	$\neg$	Nickel	mg/kg	8.7 J	11.5	7.4 F	74F
Vanadum         mg/kg         29.8 J         31.5           Zinc         ng/kg         16.2 F         27.3 U           Antumony         ng/kg         0.4 UJ         0.23 UJ           Antumony         ng/kg         0.4 UJ         0.23 UJ           Mercury         ng/kg         0.19 UJ         0.006 UJ           Selenium         ng/kg         0.19 UJ         0.19 UJ           Selenium         ng/kg         0.19 UJ         0.008 UJ           I.1.1.2.Tertachlorocthane         ng/kg         0.092 U         0.008 UJ           I.1.1.Trichlorocthane         ng/kg         0.002 U         0.0007 U           I.1.1.Trichlorocthane         ng/kg         0.002 U         0.0007 U           I.1.Drichlorocthane         ng/kg         0.002 U         0.0001 U           I.1.Drichlorocthane         ng/kg         0.004 U         0.001 U           I.1.Drichlorocthane         ng/kg         0.004 U         0.001 U           I.2.Drichlorocthane         ng/kg         0.002 U         0.001 U           I.2.Drichlorocthane         ng/kg         0.002 U         0.000 U           I.2.Drichlorocthane         ng/kg         0.002 U         0.000 U           I.2.Drichlorocthane         <	П	Tin	mg/kg	8 6 UJ	1.7 U	1.8 U	15U
Zinc         mg/kg         16.2 F         27.3 U           Antimony         mg/kg         0.47 UJ         0.23 UJ           Lead         mg/kg         0.47 UJ         0.23 UJ           Selenium         mg/kg         0.19 UJ         0.19 UJ           I.1.1.2.Textachlorecthane         mg/kg         0.02 U         0.000 U           I.1.1.2.Textachlorecthane         mg/kg         0.002 U         0.0007 U           I.1.1.2.Textachlorecthane         mg/kg         0.004 U         0.0007 U           I.1.1.2.Trichlorecthane         mg/kg         0.004 U         0.001 U           I.1.Dichlorecthane         mg/kg         0.004 U         0.001 U           I.1.Dichlorecthane         mg/kg         0.004 U         0.001 U           I.1.Dichlorecthane         mg/kg         0.002 U         0.001 U           I.2.3-Trichlorecthane         mg/kg         0.002 U         0.001 U           I.2.3-Trichlorecthane         mg/kg         0.002 U         0.001 U           I.2.1-Dichlorecthane </td <td><math>\overline{}</math></td> <td>Vanadıum</td> <td>mg/kg</td> <td>29.8 J</td> <td>31.5</td> <td>22 9 F</td> <td>28.2</td>	$\overline{}$	Vanadıum	mg/kg	29.8 J	31.5	22 9 F	28.2
Antimony         mg/kg         0.47 UJ         0.23 UJ           Lead         ng/kg         6.4         12.7           Mercury         mg/kg         0.03 U         0.0066 U           Selenium         mg/kg         1.4 UJ         0.08 UJ           Silver         ng/kg         0.021 U         0.08 UJ           1.1.1.2-Tetrachlorocthane         mg/kg         0.002 U         0.0007 U           1.1.2-Trichlorocthane         mg/kg         0.002 U         0.0007 U           1.1.2-Trichlorocthane         mg/kg         0.002 U         0.0007 U           1.1.2-Trichlorocthane         mg/kg         0.004 U         0.0007 U           1.1.2-Trichlorocthane         mg/kg         0.004 U         0.001 U           1.1.2-Trichlorocthane         mg/kg         0.004 U         0.001 U           1.1.2-Trichlorocthane         mg/kg         0.004 U         0.001 U           1.1.2-Dichlorocthane         mg/kg         0.004 U         0.001 U           1.2.2-Dichlorocthane         mg/kg         0.002 U         0.000 U           1.2.2-Dichlorocthane         mg/kg         0.002 U         0.000 U           1.2.2-Dichlorocthane         mg/kg         0.002 U         0.000 U           1.2		Zinc	mg/kg	16.2 F	27.3 U	16 3 U	13.9 U
Lead         mg/kg         6.4         12.7           Mercury         mg/kg         0.03 U         0.0066 U           Selentium         mg/kg         1.4 UJ         0.08 UJ           Sliver         0.08 UJ         0.08 UJ           Thallium         mg/kg         0.002 U         0.008 UJ           1.1.1.2-Tertachlorocthane         mg/kg         0.002 U         0.0007 U           1.1.2-Trichlorocthane         mg/kg         0.002 U         0.0001 U           1.1.2-Trichlorocthane         mg/kg         0.002 U         0.001 U           1.1.2-Trichlorocthane         mg/kg         0.004 U         0.001 U           1.1.2-Trichlorocthane         mg/kg         0.004 U         0.001 U           1.1.2-Trichlorocthane         mg/kg         0.004 U         0.001 U           1.2.3-Trichlorocthane         mg/kg         0.002 U         0.002 U           1.2-Dichlorocthane         mg/kg         0.002 U         0.002 U           1.2-Dichlorocthane <td>Ī</td> <td>Antimony</td> <td>mg/kg</td> <td>0.47 UJ</td> <td>0,23 UJ</td> <td>0.21 UJ</td> <td>0.17 UJ</td>	Ī	Antimony	mg/kg	0.47 UJ	0,23 UJ	0.21 UJ	0.17 UJ
Mercury         mg/kg         0 03 U         0.0066 U           Selenium         mg/kg         1 4 UJ         0.19 UJ           Stlver         mg/kg         0.19 UJ         0.08 UJ           Thallium         0.19 UJ         0.03 UJ         0.03 UJ           1.1.1.2-Terrachlorocthane         mg/kg         0.002 U         0.0007 U           1.1.2-Terrachlorocthane         mg/kg         0.004 U         0.0007 U           1.1.1-Dichlorocthane         mg/kg         0.004 U         0.001 U           1.1-Dichlorocthane         mg/kg         0.004 U         0.001 U           1.2-Dichlorocthane         mg/kg         0.004 U         0.001 U           1.2-Dichlorocthane         mg/kg         0.002 U         0.002 U           1.2-Dichlorocthane         mg/kg         0.002 U         0.002 U           1.2-Dichlorocthane         mg/kg         0.002 U         0.002 U           1		Lead	mg/kg	6.4	12.7	7.1	9.9
Selenium         mg/kg         14 UJ         0.19 UJ           Silver         mg/kg         0.19 UJ         0.08 UJ           Thallium         mg/kg         0.19 UJ         0.08 UJ           1.1.1.2-Tetrachlorocthane         mg/kg         0.002 U         0.0007 U           1.1.2-Trichlorocthane         mg/kg         0.002 U         0.0007 U           1.1.1-Dichlorocthane         mg/kg         0.004 U         0.001 U           1.1.1-Dichlorocthane         mg/kg         0.004 U         0.001 U           1.1.2-Trichlorocthane         mg/kg         0.004 U         0.001 U           1.1.3-Trichlorocthane         mg/kg         0.004 U         0.001 U           1.1.2-Dichlorocthane         mg/kg         0.004 U         0.001 U           1.2-Dichlorocthane         mg/kg         0.002 U         0.002 U           1.2-Dichlorocthane         mg/kg         0.002 U         0.002 U           1.2-Dichlorocthane         mg/kg         0.002 U         0.002 U <t< td=""><td><math>\overline{A}</math></td><td>Mercury</td><td>mg/kg</td><td>0 03 U</td><td>0.00<b>66</b> U</td><td>0 0062 U</td><td>0.0061 U</td></t<>	$\overline{A}$	Mercury	mg/kg	0 03 U	0.00 <b>66</b> U	0 0062 U	0.0061 U
Silver         mg/kg         0.19 UJ         0.08 UJ           Thallium         mg/kg         4 7 UJ         0.23 UJ           1.1.1.2-Tetrachloroethane         mg/kg         0.002 U         0.0008 U           1.1.2.2-Tetrachloroethane         mg/kg         0.002 U         0.0007 U           1.1.2-Trichloroethane         mg/kg         0.002 U         0.0007 U           1.1.2-Trichloroethane         mg/kg         0.002 U         0.0008 U           1.1.Dchloroethane         mg/kg         0.004 U         0.0001 U           1.1.Drichloroethane         mg/kg         0.004 U         0.001 U           1.2.3-Trichloroptopane         mg/kg         0.004 U         0.001 U           1.2-Dibromo-3-chloroptopane         mg/kg         0.004 U         0.001 U           1.2-Dichloroethane (Ethylene dibromide)         mg/kg         0.002 U         0.000 U           1.2-Dichloroethane         mg/kg         0.002 U         0.000 U           2-Chloro-1,3-butadiene         mg/kg         0.002 U         0.000 U           2-Hexanone         mg/kg         0.004 U         0.002 U           Acetomirule         mg/kg         0.004 U         0.002 U           Acetomirule         mg/kg         0.004 U         0		Selenium	mg/kg	1 4 UJ	0.19 UJ	0.18 UJ	0.14 UJ
Thallium         mg/kg         47 UJ         0.23 UJ           1.1.1.2.Tetrachloroethane         mg/kg         0.002 U         0.008 U           1.1.2.2-Tetrachloroethane         mg/kg         0.003 U         0.0007 U           1.1.2.2-Trichloroethane         mg/kg         0.004 U         0.0007 U           1.1.2-Trichloroethane         mg/kg         0.004 U         0.001 U           1.1.Dchloroethane         mg/kg         0.004 U         0.001 U           1.1.Dchloroethane         mg/kg         0.004 U         0.001 U           1.1.Dchloropropane         mg/kg         0.004 U         0.001 U           1.2.3-Trichloropropane         mg/kg         0.004 U         0.001 W           1.2-Dibromoethane (Ethylene dibromide)         mg/kg         0.002 U         0.000 U           1.2-Dichloroethane         mg/kg         0.002 U         0.002 U           2-Chloro-1,3-butadiene         mg/kg         0.004 U         0.002 U           Acetonie         mg/kg         0.004 U		Silver	mg/kg	U 61.0	0.08 UJ	0 075 UJ	0.059 UJ
1,1,1,2-Tetrachlorocethane         mg/kg         0 002 U         0.0007 U           1,1,1,2,2-Tetrachlorocethane         mg/kg         0.003 U         0.0007 U           1,1,2,2-Tetrachlorocethane         mg/kg         0.002 U         0.0007 U           1,1,2,2-Trethlorocethane         mg/kg         0.004 U         0.001 U           1,1-Driborocethane         mg/kg         0.004 U         0.001 U           1,1-Driborocethane         mg/kg         0.004 U         0.001 U           1,2,3-Trichloropropane         mg/kg         0.004 U         0.001 W           1,2-Dibromo-3-chloropropane         mg/kg         0.002 U         0.001 W           1,2-Dibromo-3-chloropropane         mg/kg         0.002 U         0.0001 W           1,2-Dibromo-sthane (Ethylene dibromide)         mg/kg         0.002 U         0.0001 W           1,2-Dichloropropane         mg/kg         0.002 U         0.0006 U           1,2-Dichloropropane         mg/kg         0.002 U         0.0007 U           1,2-Dichloropropane         mg/kg         0.004 U         0.0007 U           2-Chloro-1,3-buadiene         mg/kg         0.004 U         0.002 U           2-Chloro-1,3-buadiene         mg/kg         0.004 U         0.002 U           Accione <td><math>\neg</math></td> <td>Thallium</td> <td>mg/kg</td> <td>4 7 UJ</td> <td>0.23 UJ</td> <td>0.21 UJ</td> <td>0 17 UJ</td>	$\neg$	Thallium	mg/kg	4 7 UJ	0.23 UJ	0.21 UJ	0 17 UJ
1,1,1-Trichloroethane         mg/kg         0.003 U         0.0007 U           1,1,2,2-Tetrachloroethane         mg/kg         0.002 U         0.0007 U           1,1,2-Trichloroethane         mg/kg         0.002 U         0.001 U           1,1-Drichloroethane         mg/kg         0.004 U         0.001 U           1,1-Drichloroethane         mg/kg         0.004 U         0.001 U           1,2-3-Trichloropropane         mg/kg         0.004 U         0.001 U           1,2-Dibromo-3-chloropropane         mg/kg         0.002 U         0.001 R           1,2-Dibromo-3-chloropropane         mg/kg         0.002 U         0.0008 U           1,2-Distiloropropane         mg/kg         0.002 U         0.0008 U           1,2-Dichloropropane         mg/kg         0.002 U         0.0006 U           1,2-Dichloropropane         mg/kg         0.002 U         0.0007 U           2-Chloro-1,3-butadene         mg/kg         0.004 U         0.002 U           2-Chloro-1,3-butadene         mg/kg         0.004 U         0.002 U           Accione         mg/kg         0.004 U         0.002 U           Accione         mg/kg         0.033 U         0.004 U           Accion         mg/kg         0.033 U	$\neg$	1,1,1,2-Tetrachloroethane	mg/kg	0 002 U	0.0008 U	0.0006 U	0.0007 U
1,1,2,2-Tetrachloroethane         mg/kg         0.002 U         0.0007 U           1,1,2-Trchloroethane         mg/kg         0.004 U         0.001 U           1,1-Dichloroethane         mg/kg         0.004 U         0.001 U           1,1-Dichloroethene         mg/kg         0.004 U         0.001 U           1,2-3-Trichloropropane         mg/kg         0.004 U         0.001 U           1,2-3-Trichloropropane         mg/kg         0.004 U         0.001 W           1,2-Dibromochhane (Ethylene dibromide)         mg/kg         0.002 U         0.000 W           1,2-Dichloroptopane         mg/kg         0.002 U         0.000 W           1,2-Dichloroptopane         mg/kg         0.002 U         0.000 U           1,2-Dichloroptopane         mg/kg         0.002 U         0.000 U           1,2-Dichloroptopane         mg/kg         0.002 U         0.000 U           2-Chloro-1,3-butadiene         mg/kg         0.004 U         0.000 U           2-Hexanone         mg/kg         0.004 U         0.002 U           Acetone         mg/kg         0.004 U         0.004 U           Acetone         mg/kg         0.033 U         0.004 U           Acrolem         mg/kg         0.033 U         0.004 U	SW8260B	1,1,1.Trichloroethane	mg/kg	0.003 U	U 7000.0	0.0005 U	0.0006 U
1,1,2-Trichlorocethane         mg/kg         0.004 U         0.0008 U           1,1-Dichlorocethane         mg/kg         0.004 U         0.001 U           1,1-Dichlorocethane         mg/kg         0.004 U         0.001 U           1,2,3-Trichloropropane         mg/kg         0.004 U         0.001 W           1,2-Dibromo-3-chloropropane         mg/kg         0.002 U         0.001 R           1,2-Dibromo-thane (Ethylene dibromide)         mg/kg         0.002 U         0.0008 U           1,2-Dichloropropane         mg/kg         0.002 U         0.0006 U           1,2-Dichloropropane         mg/kg         0.004 U         0.0007 U           2-Chloro-1,3-butadiene         mg/kg         0.004 U         0.002 U           Acetone         mg/kg         0.004 U         0.002 U           Acetone         mg/kg         0.003 U         0.004 U           Acetone         mg/kg         0.033 U         0.004 U           Acrolein         mg/kg         0.033 U         0.004 U		1,1,2,2-Tetrachloroethane	mg/kg	0.002 U	U 7000.0	O 0006 U	0.0006 U
1,1-Dichloroethane         mg/kg         0.002 U         0.001 U           1,1-Dichloroethene         mg/kg         0.004 U         0.001 U           1,2.3-Trichloroptopane         mg/kg         0.004 U         0.001 U           1,2-Dibromo-3-chloropropane         mg/kg         0.004 U         0.001 W           1,2-Dibromoethane (Ethylene dibromide)         mg/kg         0.002 U         0.000 W           1,2-Dichloroptopane         mg/kg         0.002 U         0.0006 U           1,2-Dichloroptopane         mg/kg         0.002 U         0.0006 U           1,2-Dichloroptopane         mg/kg         0.002 U         0.0006 U           2-Chloro-1,3-butadiene         mg/kg         0.004 U         0.0007 U           2-Hexanone         mg/kg         0.004 U         0.002 U           Actone         mg/kg         0.004 U         0.002 U           Actone         mg/kg         0.003 U         0.004 U           Actolenn         mg/kg         0.033 U         0.004 U           Actolenn         mg/kg         0.003 U         0.004 U           Actolenn         mg/kg         0.003 U         0.004 U           Actolenn         0.001 U         0.004 U         0.004 U	_	1,1,2-Trichloroethane	mg/kg	0.004 U	U 8000.0	0 0000 U	0 0007 U
1,1-Dichloroethene         mg/kg         0.004 U         0.001 U           1,2,3-Trichloropropane         mg/kg         0.004 U         0.001 U           1,2-Dibromo-3-chloropropane         mg/kg         0.004 U         0.001 R           1,2-Dibromoethane (Ethylene dibromide)         mg/kg         0.002 U         0.0008 U           1,2-Dichloroethane         mg/kg         0.002 U         0.0006 U           1,2-Dichloropropane         mg/kg         0.002 U         0.0006 U           2-Chloro-1,3-butadiene         mg/kg         0.004 U         0.0007 U           2-Hexanone         mg/kg         0.004 U         0.0007 U           Actone         mg/kg         0.004 U         0.002 U           Actolen         mg/kg         0.003 U         0.004 U           Actolen         mg/kg         0.033 U         0.002 U           Actolen         mg/kg         0.033 U         0.004 U	SW8260B	1,1-Dichloroethane	mg/kg	0.002 U	0.001 U	0.0008 U	0.0008 U
1,2,3-Trichloropropane         mg/kg         0.004 U         0.001 U           1,2-Dibromo-3-chloropropane         mg/kg         0.002 U         0.001 R           1,2-Dibromoethane (Ethylene dibromide)         mg/kg         0.002 U         0.0008 U           1,2-Dichloroethane         mg/kg         0.002 U         0.0006 U           1,2-Dichloropropane         mg/kg         0.002 U         0.001 U           2-Chloro-1,3-butadnene         mg/kg         0.004 U         0.0007 U           2-Hexanone         mg/kg         0.004 U         0.002 U           Acetone         mg/kg         0.004 U         0.002 U           Acetonitrile         mg/kg         0.033 U         0.028 U           Acrolein         mg/kg         0.033 U         0.004 U	_	1,1-Dichloroethene	mg/kg	0.004 U	0.001 U	0.0009 U	0 001 U
1,2-Dibromo-3-chloropropane         mg/kg         0.004 U         0.001 R           1,2-Dibromoethane (Ethylene dibromide)         mg/kg         0.002 U         0.0008 U           1,2-Dichloroethane         mg/kg         0.002 U         0.0006 U           1,2-Dichloropropane         mg/kg         0.002 U         0.0007 U           2-Chloro-1,3-butadiene         mg/kg         0.004 U         0.0007 U           2-Hexanone         mg/kg         0.004 U         0.002 U           Acetone         mg/kg         0.004 U         0.002 U           Acetonitrile         mg/kg         0.033 U         0.028 U           Acrolein         mg/kg         0.033 U         0.004 U	_	1,2,3-Trichloropropane	mg/kg	0.004 U	0.001 U	0,001 U	0 001 U
1,2-Dibromoethane (Ethylene dibromide)         mg/kg         0.002 U         0.0006 U           1,2-Dichloroptopane         mg/kg         0.002 U         0.0006 U           1,2-Dichloroptopane         mg/kg         0.002 U         0.001 U           2-Chloro-1,3-buadiene         mg/kg         0.004 U         0.002 U           2-Hexanone         mg/kg         0.004 U         0.002 U           Acetone         mg/kg         0.004 U         0.004 U           Acetonitrile         mg/kg         0.033 U         0.028 U           Acrolein         mg/kg         0.083 U         0.004 U	┪	1,2-Dibromo-3-chloropropane	mg/kg	0.004 U	0.001 R	0.001 R	0.001 R
1,2-Dichloroethane         mg/kg         0.002 U         0.0006 U           1,2-Dichloropropane         mg/kg         0.002 U         0.001 U           2-Chloro-1,3-butadiene         mg/kg         0.004 U         0.002 U           2-Hexanone         mg/kg         0.004 U         0.002 U           Acetone         mg/kg         0.004 U         0.004 U           Acetontrile         mg/kg         0.033 U         0.028 U           Acrolein         mg/kg         0.033 U         0.004 U           Acrylontrile         mg/kg         0.033 U         0.004 U	$\neg$	1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.002 U	0.0008 U	0.0007 U	0.0007 U
1,2-Dichloropropane         mg/kg         0.002 U         0.001 U           2-Chloro-1,3-butadiene         mg/kg         0.004 U         0.0007 U           2-Hexanone         mg/kg         0.004 U         0.002 U           Acetone         mg/kg         0.004 U         0.004 U           Acetonitrile         mg/kg         0.033 U         0.028 U           Acrolein         mg/kg         0.083 U         0.041 U           Acrylontrile         mg/kg         0.033 U         0.004 U	_	1,2-Dichloroethane	mg/kg	0.002 U	0.0006 U	0.0005 U	0.0006 U
2-Chloro-1,3-butadiene         mg/kg         0.004 U         0.0007 U           2-Hexanone         mg/kg         0.004 U         0.002 U           Acetone         mg/kg         0.004 U         0.004 U           Acetonitrile         mg/kg         0.033 U         0.028 U           Acrolein         mg/kg         0.083 U         0.041 U           Acrylonitrile         mg/kg         0.033 U         0.008 U	$\neg$	1,2-Dichloropropane	mg/kg	0.002 U	0 001 U	0.0008 U	0.0009 U
2-Hexanone         mg/kg         0.004 U         0.002 U           Acetone         mg/kg         0.004 U         0.004 U           Acetonitrile         mg/kg         0.033 U         0.028 U           Acrolein         mg/kg         0.083 U         0.041 U           Acrylontrile         mg/kg         0.033 U         0.031 U	Т	2-Chloro-1, 3-butadiene	mg/kg	0.004 U	U 7000.0	0.0006 U	0.0006 U
Acetone         mg/kg         0.004 U         0.004 U           Acetonitrile         mg/kg         0.033 U         0.028 U           Acrolein         mg/kg         0.083 U         0.041 U           Acrylonitrile         mg/kg         0.033 U         0.031 U	$\neg$	2-Hexanone	mg/kg	0.004 U	0.002 U	0 001 U	0.002 U
Acetonitrile         mg/kg         0.033 U         0.028 U           Acrolein         mg/kg         0.083 U         0.041 U           Acrylonitrile         mg/kg         0.033 U         0.031 U	П	Acetone	mg/kg	0.004 U	0.004 U	0.004 R	0.014 R
Acrolein         mg/kg         0 083 U         0.041 U           Acrylonitrile         ng/kg         0.033 U         0.008 U	┰	Acetonitrile	mg/kg	0.033 U	0.028 U	0 023 U	0.025 U
Acrylonitrile	$\neg$	Acrolein	mg/kg	0 083 U	0.041 U	0 033 U	0.036 U
0.000	_	Acrylonitrile	mg/kg	0.033 U	0.008 U	0.006 U	0.007 U

-			BHGLAOC1904 05 ft	BHGLAOC1905 00 ft	BHGLAOC1905 05 ft	BHGLAOC1905 10 ft
Method.	Analyte :	Unit	2000-05-15	2001-08-20	2001-08-20	2001-08-20
SW8260B	Allyl chloride (3-Chloropropene)	mg/kg	0.008 U	0 002 U	0 002 U	0.002 U
SW8260B	Benzene	mg/kg	0.002 U	0.0007 U	Ω 9000'0	വ 9000 0
SW8260B	Bromodichloromethane	mg/kg	0.003 U	0.0007 U	0.0006 U	Ω 9000 0
SW8260B	Вготобогт	mg/kg	0 004 U	0.001 U	0.0008 U	0.0009 U
SW8260B	Bromomethane	mg/kg	0.004 U	0.003 R	0.003 R	0.003 R
SW8260B	Carbon disulfide	mg/kg	0 004 U	0.002 U	0 002 U	0.002 U
SW8260B	Carbon tetrachloride	mg/kg	0.004 U	N 6000 0	U 7000 0	0.0008 U
SW8260B	Chlorobenzene	mg/kg	0.002 U	0.001 U	0 0008 U	0.0009 U
SW8260B	Chloroethane	mg/kg	0.004 U	0.002 R	0.001 U	0.002 U
	Chloroform	mg/kg	0 002 U	0.0007 U	0 0005 U	0.0006 U
SW8260B		mg/kg	0.004 U	0.001 R	O 8000 O	0.0009 U
SW8260B	cis-1,2-Dichloroethene	mg/kg	0.004 U	0.001 U	0.001 Ū	0.001 U
SW8260B	cis-1,3-Dichloropropene	mg/kg	0.004 U	0.0009 U	0.0007 U	0.0008 U
SW8260B	Dibromochloromethane	mg/kg	0.002 U	0.0008 U	U 9000.0	U 7000.0
SW8260B	Dibromomethane	mg/kg	0.004 U	0.0008 U	0.0006 U	0.0007 U
SW8260B	Dichlorodifluoromethane	mg/kg	0.004 R	0.0008 U	0.0007 U	0 0007 U
SW8260B	Ethyl methacrylate	mg/kg	0.004 U	0 002 U	U 100 U	0.001 U
SW8260B	Ethylbenzene	mg/kg	0.002 U	U 100 0	0 001 U	0.001 U
	Iodomethane (Methyl 10d1de)	mg/kg	0.004 U	0.004 U	0 003 R	0.003 R
SW8260B	Isobutanol	mg/kg	0.16 U	0 092 U	0 073 U	Ω 80 0
SW8260B	m,p-Xylene (sum of isomers)	mg/kg	0.004 U	0 002 U	0 002 U	0 002 U
T	Methyl ethyl ketone (2-Butanone)	mg/kg	0.004 U	0.005 U	0.004 U	0.004 U
	Methyl isobutyl ketone (4-Methyl-2-pentanone)	mg/kg	0.004 U	0.003 U	0.003 U	0.003 U
	Methyl methacrylate	mg/kg	0.004 U	0.002 U	0.002 U	0.002 U
	Methylacrylonitrile	mg/kg	0 004 U	0.005 U	0.004 U	0.004 U
	Methylene chloride	mg/kg	0 007 U	0.002 U	0.002 U	0.002 U
SW8260B	o-Xylene (1,2-Dimethylbenzene)	mg/kg	0 004 U	0.001 U	0.0008 U	0.0009 U
SW8260B	Pentachloroethane	mg/kg	0.004 U	0.006 R	0 005 U	0.005 U
SW8260B	Propane nitrile (Propionitrile)	mg/kg	0.016 U	0.021 U	0 017 U	0.018 U
SW8260B	Styrene	mg/kg	0.002 U	0 001 U	0 0000 n	0.001 U
SW8260B	Tert-Butyl Methyl Ether	mg/kg	0.004 U	0.0007 U	0 0000 N	0.0006 U
SW8260B	Tetrachloroethene (PCE)	mg/kg	0 004 U	0.0007 U	0.0006 U	0.0006 U
SW8260B	Toluene	mg/kg	0 004 U	0.001 U	0.0009 U	0.001 U
SW8260B	Trans-1,2-Dichloroethene	mg/kg	0.002 U	0.001 U	0.0008 U	O 0009 U



Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

MethodAnalyteSW8260BTrans-1,3-DichloropropeneSW8260BTrichloroethene (TCE)SW8260BTrichloroethene (TCE)SW8260BTrichlorofluoromethaneSW8260BVinyl acetateSW8260BVinyl chlorideSW8270C1,2,4,5-TetrachlorobenzeneSW8270C1,2,4-TrichlorobenzeneSW8270C1,3,5-TrinitrobenzeneSW8270C1,3-DichlorobenzeneSW8270C1,4-DichlorobenzeneSW8270C1,4-DichlorobenzeneSW8270C1,4-DiphthoquinoneSW8270C1,4-DiphthoquinoneSW8270C2,2'-Oxybis(1-chlorophenolSW8270C2,3,4,6-TetrachlorophenolSW8270C2,4,5-TrichlorophenolSW8270C2,4,6-TrichlorophenolSW8270C2,4,6-TrichlorophenolSW8270C2,4,6-TrichlorophenolSW8270C2,4-DichlorophenolSW8270C2,4-DichlorophenolSW8270C2,4-DimitrophenolSW8270C2,4-DimitrophenolSW8270C2,4-DimitrophenolSW8270C2,4-DimitrophenolSW8270C2,4-DimitrophenolSW8270C2,4-DimitrophenolSW8270C2,4-DimitrophenolSW8270C2,4-DimitrophenolSW8270C2,4-DimitrophenolSW8270C2,4-DimitrophenolSW8270C2,4-DimitrophenolSW8270C2,4-Dimitrophenol	Unit  mg/kg	2000-05-15 0.004 U 0.004 U 0.003 U 0.003 U 0.004 U 0.004 U 0.004 U 0.35 U 0.35 U 0.35 U 0.35 U	2001-08-20 0 0009 U 0.002 U 0.0006 U 0.0006 U 0.0008 U 0.0008 U 0.0008 U 0.0008 U 0.0008 U 0.0008 U 0.0009 U 0.11 U 0.89 U 0.89 U 0.91 U	2001-08-20 0 0007 U 0 0002 U 0 0006 U 0 0005 U 0 0005 U 0 0005 U 0 0006 U 0 0005 U 0 0005 U 0 0005 U 0 0005 U 0 0 0005 U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2001-08-20 0 0008 U 0.002 U 0.0006 U 0.0007 U 0.0007 U 0.0007 U 0.0007 U 0.0007 U 0.0007 U 0.0007 U 0.0007 U 0.0007 U
Trans-1,3-Dichloropropene Trans-1,4-Dichloro-2-Butene Trichloroethene (TCE) Trichloroethene (TCE) Trichlorofluoromethane Vinyl acetate Vinyl acetate Vinyl acetate 1,2,4,5-Tetrachlorobenzene 1,2,4-Trichlorobenzene 1,3-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dioxane (p-Dioxane) 1,4-Dichlorophenol 2,2,4-G-Trichlorophenol 2,4,5-Trichlorophenol 2,4-Dinchlorophenol 2,4-Dimethylphenol 2,4-Dimethylphenol 2,4-Dimethylphenol 2,4-Dimethylphenol 2,4-Dimethylphenol 2,4-Dimethylphenol 2,5-Dichlorophenol 2,6-Dichlorophenol	mg/kg   mg/k	0.004 U 0.004 U 0.003 U 0.004 U 0.004 U 0.35 U 0.35 U 0.35 U 0.35 U 0.35 U 0.35 U	0 0009 U 0.002 U 0.0006 U 0.0006 U 0.0008 U 0.22 U 0.059 U 0.11 U 0.11 U 0.41 U 0.09 U	0.002 U 0.002 U 0.006 U 0.0006 U 0.0005 U 0.21 U 0.055 U 0.055 U 0.055 U 0.058 U 0.058 U 0.058 U 0.058 U 0.058 U	0 0008 U 0.002 U 0.0006 U 0.0007 U 0.0007 U 0.0007 U 0.21 U 0 056 U 0.098 U 0 098 U
Trans-1,4-Dichloro-2-Butene Trichloroethene (TCE) Trichlorofluoromethane Vinyl acetate Vinyl acetate Vinyl chloride 1,2,4.5-Tetrachlorobenzene 1,2,4.5-Trichlorobenzene 1,3-5-Trinitrobenzene 1,3-5-Trinitrobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichloropenzene 1,4-Dichloropenzene 1,4-Dichloropenzene 1,4-Naphthylamine 2,2'-Oxybis(1-chloropropane) 2,3,4,6-Tetrachlorophenol 2,4,6-Trichlorophenol 2,4-Dimethylphenol 2,4-Dimethylphenol 2,4-Dimethylphenol 2,4-Dimethylphenol 2,4-Dimethylphenol 2,5-Dichlorophenol 2,6-Dichlorophenol	mg/kg   mg/k	0.004 U 0.003 U 0.003 U 0.004 U 0.004 U 0.35 U 0.35 U 1.4 U 0.35 U 0.35 U 0.35 U	0.002 U 0.0006 U 0.0008 U 0.0006 U 0.0008 U 0.22 U 0.059 U 0.11 U 0.11 U 0.41 U 0.09 U	0.002 U 0.006 0.006 U 0.0006 U 0.0006 U 0.055 U 0.055 U 0.055 U 0.055 U 0.055 U 0.055 U 0.055 U 0.055 U 0.055 U	0.002 U 0.0006 U 0.0007 U 0.0005 U 0.0007 U 0.21 U 0.056 U 0.098 U 0.098 U
Trichloroethene (TCE) Trichloroethene (TCE) Trichlorofluoromethane Vinyl acetate Vinyl chloride 1,2,4,5-Tetrachlorobenzene 1,2-4-Trichlorobenzene 1,3-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Naphthylamine 1,4-Naphthylamine 2,2'-Oxybis(1-chloropropane) 2,3,4,6-Trichlorophenol 2,4,6-Trichlorophenol 2,4-Dimethylphenol 2,4-Dimethylphenol 2,4-Dimethylphenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,6-Dichlorophenol 2,6-Dichlorophenol 2,6-Dichlorophenol	mg/kg	0 009 0.003 U 0.004 U 0.004 U 0.35 U 0.35 U 1.4 U 0.35 U 0.35 U 0.35 U	0.0006 U 0.0008 U 0.0008 U 0.0008 U 0.009 U 0.11 U 0.41 U 0.09 U	0.006 0.0006 U 0.0005 U 0.0006 U 0.21 U 0.055 U 0.055 U 0.82 U 0.1 U 0.38 U 0.083 U	0.0006 U 0.0007 U 0.0007 U 0.21 U 0.056 U 0.098 U 0.84 U
Vinyl acetate  Vinyl chloride  1,2,4,5-Tetrachlorobenzene 1,2,4-Trichlorobenzene 1,2-d-Trichlorobenzene 1,3-Dichlorobenzene 1,3-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Naphthylamine 2,2,-Oxybis(1-chloropropane) 2,3,4,6-Tetrachlorophenol 2,4,6-Trichlorophenol 2,4-Dimethylphenol 2,4-Dimethylphenol 2,4-Dimethylphenol 2,4-Dimethylphenol 2,4-Dimethylphenol 2,4-Dimethylphenol 2,6-Dichlorophenol 2,6-Dichlorophenol	mg/kg	0.003 U 0.004 U 0.004 U 0.35 U 0.35 U 1.4 U 0.35 U 0.35 U 1.4 U 1.4 U 1.4 U	0.0008 U 0.0006 U 0.0008 U 0.22 U 0.059 U 0.11 U 0.41 U 0.09 U	0 0006 U 0 0005 U 0.0006 U 0.21 U 0.055 U 0 82 U 0.1 U 0 38 U 0 083 U	0.0007 U 0.0005 U 0.0007 U 0.21 U 0.056 U 0.098 U 0.84 U
Vinyl acetate  Vinyl chloride  1,2,4,5-Tetrachlorobenzene 1,2,4-Trichlorobenzene 1,3-Dichlorobenzene 1,3-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Naphthylamine 2,2,1-Oxybis(1-chloropropane) 2,3,4,6-Tetrachlorophenol 2,4,6-Trichlorophenol 2,4-Dimethylphenol 2,4-Dimethylphenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,5-Dichlorophenol 2,6-Dichlorophenol 2,6-Dichlorophenol	mg/kg   mg/k	0.004 U 0.004 U 0.35 U 0.35 U 1.4 U 0.35 U 0.35 U	0.0006 U 0.0008 U 0.22 U 0.059 U 0.1 U 0.89 U 0.11 U 0.09 U	0 0005 U 0.0006 U 0.21 U 0.055 U 0 036 U 0.1 U 0 38 U 0 083 U	0.0005 U 0.0007 U 0.21 U 0.056 U 0.098 U 0.84 Ü
Vinyl chloride  1,2,4,5-Tetrachlorobenzene 1,2,4-Trichlorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Naphthylamine 1,4-Naphthylamine 2,2,1-Oxybis(1-chloropropane) 2,3,4,6-Tetrachlorophenol 2,4,6-Trichlorophenol 2,4-Dimethylphenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,6-Dichlorophenol 2,6-Dichlorophenol	mg/kg   mg/k	0.004 U 0.35 U 0.35 U 0.35 U 1.4 U 0.35 U 0.35 U	0.0008 U 0.22 U 0.059 U 0.1 U 0.89 U 0.11 U 0.09 U	0.0006 U 0.21 U 0.055 U 0 096 U 0 82 U 0.1 U 0 38 U 0 083 U	0.0007 U 0.21 U 0.056 U 0.098 U 0.84 Ü
1,2,4,5-Tetrachlorobenzene 1,2,4-Trichlorobenzene 1,2-Dichlorobenzene 1,3-Drichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Diploxane (p-Dioxane) 1,4-Naphthylamine 1,4-Naphthylamine 2,2,1-Oxybis(1-chlorophenol 2,4,5-Trichlorophenol 2,4,5-Trichlorophenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,5-Dichlorophenol 2,6-Dichlorophenol 2,6-Dichlorophenol	mg/kg           mg/kg           mg/kg           mg/kg           mg/kg           mg/kg           mg/kg           mg/kg	0.35 U 0.35 U 0.35 U 1.4 U 0.35 U 0.35 U 1.4 U	0 22 U 0.059 U 0.1 U 0.89 U 0.11 U 0.09 U 0.09 U	0.21 U 0.055 U 0 096 U 0 82 U 0.1 U 0 38 U 0 083 U	0.21 U 0.056 U 0.098 U 0.84 U
1,2,4-Trichlorobenzene 1,2-Dichlorobenzene 1,3-S-Trinitrobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Diphthoquinone 1,4-Diphthylamine 1,2-Oxybis(1-chloropropane) 2,2,4,6-Tetrachlorophenol 2,4,5-Trichlorophenol 2,4-Dichlorophenol 2,4-Dimtriophenol 2,4-Dimtriophenol 2,4-Dimtriophenol 2,4-Dimtriophenol 2,4-Dimtriophenol 2,4-Dimtriophenol 2,6-Dichlorophenol 2,6-Dichlorophenol	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	0.35 U 0.35 U 1.4 U 0.35 U 0.35 U 1.4 U	0.059 U 0.1 U 0.89 U 0.11 U 0.41 U 0.09 U	0.055 U 0 096 U 0 82 U 0.1 U 0 38 U 0 083 U	0 056 U 0.098 U 0 84 U 0.11 U
1,2-Dichlorobenzene 1,3,5-Trinitrobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dioxane (p-Dioxane) 1,4-Naphthoquinone 1,4-Naphthylamine 2,2'-Oxybis(1-chloropropane) 2,3,4,6-Tetrachlorophenol 2,4,5-Trichlorophenol 2,4-Dichlorophenol 2,4-Dimethylphenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,5-Dichlorophenol 2,6-Dichlorophenol	mg/kg mg/kg mg/kg mg/kg mg/kg	0 35 U 1.4 U 0.35 U 0.35 U 1.4 U	0.1 U 0.89 U 0.11 U 0.41 U 0.09 U	0 096 U 0 82 U 0.1 U 0 38 U 0 083 U	0.098 U 0 84 U 0.11 U
1,3,5-Trinitrobenzene 1,3-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dioxane (p-Dioxane) 1,4-Naphthoquinone 1-Naphthylamine 2,2'-Oxybis(1-chloroprane) 2,3,4,6-Tetrachlorophenol 2,4,5-Trichlorophenol 2,4-Dirichlorophenol 2,4-Dimethylphenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,5-Dichlorophenol 2,6-Dichlorophenol 2,6-Dichlorophenol	mg/kg mg/kg mg/kg mg/kg mg/kg	1.4 U 0.35 U 0.7 U 0.35 U 1 4 U	0.89 U 0.11 U 0.41 U 0.09 U 0.98 U	0.1 U 0.1 U 0.38 U 0.083 U 0.081 U	0 84 U 0.11 U
1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Diphthogumone 1,4-Naphthogumone 1-Naphthylamine 2,2'-Oxybis(1-chloropropane) 2,3,4,6-Tetrachlorophenol 2,4,5-Trichlorophenol 2,4,6-Trichlorophenol 2,4-Dimethylphenol 2,4-Dimethylphenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,6-Dichlorophenol 2,6-Dichlorophenol	mg/kg mg/kg mg/kg mg/kg mg/kg	0.35 U 0.7 U 0.35 U 1 4 U	0.11 U 0.41 U 0.09 U 0.98 U	0.1 U 0.38 U 0.083 U 0.9 H	0.11 U
1,3-Dinitrobenzene 1,4-Dichlorobenzene 1,4-Dioxane (p-Dioxane) 1,4-Naphthylamine 1-Naphthylamine 2,2'-Oxybis(1-chloropropane) 2,3,4,6-Trethlorophenol 2,4,5-Trichlorophenol 2,4,6-Trichlorophenol 2,4-Dimethylphenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,5-Dichlorophenol 2,6-Dichlorophenol	mg/kg mg/kg mg/kg mg/kg	0.7 U 0.35 U 1 4 U	0.41 U 0.09 U 0.98 U	0.38 U 0.083 U 0.911	
1,4-Dichlorobenzene 1,4-Dioxane (p-Dioxane) 1,4-Naphtholaumone 1-Naphthylamine 2,2'-Oxybis(1-chloropropane) 2,4,6-Trethlorophenol 2,4,6-Trichlorophenol 2,4-Dirichlorophenol 2,4-Dimethylphenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,5-Dichlorophenol 2,6-Dichlorophenol	mg/kg mg/kg mg/kg	0.35 U 1 4 U	U 80.0 U 86.0	0 083 U	0.38 U
1,4-Dioxane (p-Dioxane) 1,4-Naphthoquinone 1-Naphthylamine 2,2'-Oxybis(1-chloropropane) 2,4,6-Tetrachlorophenol 2,4,6-Trichlorophenol 2,4-Dirthorophenol 2,4-Dimethylphenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,5-Dichlorophenol 2,6-Dichlorophenol	mg/kg mg/kg mg/kg	14U	U 86.0	1100	0 084 U
1,4-Naphthoquinone 1-Naphthylamine 2,2'-Oxybis(1-chloropropane) 2,3,4,6-Tetrachlorophenol 2,4,5-Trichlorophenol 2,4-Dichlorophenol 2,4-Dimethylphenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,5-Dichlorophenol 2,6-Dichlorophenol	mg/kg mg/kg			3	0.92 U
1-Naphthylamine 2,2'-Oxybis(1-chloropropane) 2,3,4,6-Tetrachlorophenol 2,4,5-Trichlorophenol 2,4,6-Trichlorophenol 2,4-Dichlorophenol 2,4-Dimethylphenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,5-Dichlorophenol	mg/kg	18R	1.5 U	1.4 U	1.4 U
2,2'-Oxybis(1-chloropropane) 2,3,4,6-Tetrachlorophenol 2,4,5-Trichlorophenol 2,4,6-Trichlorophenol 2,4-Dichlorophenol 2,4-Dimethylphenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,5-Dichlorophenol	4.0.4	0.7 U	0 62 U	0 57 U	0.58 U
2,3,4,6-Tetrachlorophenol 2,4,5-Trichlorophenol 2,4,6-Trichlorophenol 2,4-Dichlorophenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,5-Dichlorophenol	mg/Kg	0.35 U	0.21 U	0.19 U	0.2 U
2,4,5-Trichlorophenol 2,4,6-Trichlorophenol 2,4-Dichlorophenol 2,4-Dimethylphenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,6-Dichlorophenol	mg/kg	0.35 U	0.34 U	0.31 U	0.32 U
2,4,6-Trichlorophenol 2,4-Dichlorophenol 2,4-Dimethylphenol 2,4-Dinitrophenol 2,4-Dimitrotoluene 2,6-Dichlorophenol	mg/kg	1.8 U	0.081 U	0.075 U	0.076 U
2,4-Dichlorophenol 2,4-Dimethylphenol 2,4-Dimtrophenol 2,4-Dimtrotoluene 2,6-Dichlorophenol	mg/kg	0.35 U	0.082 U	0.076 U	0.077 U
2,4-Dimethylphenol 2,4-Dimtrophenol 2,4-Dintrotoluene 2,6-Dichlorophenol	mg/kg	0.35 U	0.069 U	0.064 U	0.065 U
2,4-Dinitrophenol 2,4-Dinitrotoluene 2,6-Dichlorophenol	mg/kg	0 35 U	0.27 U	0 25 U	0.25 U
2,4-Dinitrotoluene 2,6-Dichlorophenol	mg/kg	1. <u>8</u> U	0.24 U	0.22 U	0 22 U
12.6-Dichlorophenol	mg/kg	0 35 U	0.09 U	0.083 U	0.084 U
	mg/kg	0.35 U	0.26 U	0.24 U	0.25 U
	mg/kg	0.35 U	0.095 U	0.087 U	0.089 U
2-Acetylaminofluorene	mg/kg	0.7 U	0.65 U	Ω 9.0	0.61 U
2-Ammonaphthalene (beta-Naphthylamine)	mg/kg	0.7 U	0.63 U	0.58 U	0.59 U
2-Chloronaphthalene	mg/kg	0.35 U	N 990 0	0.06 U	0.061 U
2-Chlorophenol	mg/kg	0.35 U	0.084 U	0.077 U	0.078 U
2-Methylnaphthalene	mg/kg	0.35 U	0.29 U	0.27 U	0.27 U
2-Methylphenol (o-Cresol)	mg/kg	0.35 U	0.15 U	0.14 U	0.14 U
2-Nitroaniline	mg/kg	1.8 U	0.13 U	0.12 U	0.12 U
SW82/UC   2-Nitrophenot	mg/kg	0 35 U	0.093 U	0 086 Ū	0.088 U

Table E.1 Comprehensive Soil Results AOC 19 NAS Fort Worth JRB, Texas

	And the second s		BHGLAOC1904 05 ft	BHGLAOC1905 00 ft	BHGLAOC1905 05 ft	BHGLAOC1905 10 ft
Methód	Analyte	Unit	2000-05-15	2001-08-20	2001-08-20	2001-08-20
	2-Picoline (alpha-Picoline)	mg/kg	0 35 U	0 27 U	0 25 U	0.26 U
	3,3'-Dichlorobenzidine	mg/kg	0 7 U	0 14 U	0.13 U	0.13 U
	3,3'-Dimethylbenzidine	mg/kg	18 U	0 37 U	0.34 U	0.34 U
	3-Methylcholanthrene	mg/kg	0.35 U	0.37 U	0.34 U	0.34 U
SW8270C 3	3-Nitroaniline	mg/kg	18U	0 17 U	0.16 U	0.16 U
	4,6-Dinitro-2-methylphenol	mg/kg	18U	0 17 U	0.16 U	0.16 U
SW8270C 4	4-Aminobiphenyl (4-Biphenylamine)	mg/kg	0 7 U	0.35 U	0 32 U	0.32 U
SW8270C 4	SW8270C   4-Bromophenyl phenyl ether	mg/kg	0 35 U	0 11 U	0.10	0 1 U
SW8270C 4	SW8270C 4-Chloro-3-methylphenol	mg/kg	0.35 U	0.1 U	0.095 U	0.097 U
SW8270C 4	SW8270C 4-Chloroamline	mg/kg	0 35 U	0 15 U	0.14 U	0.14 U
SW8270C 4	SW8270C 4-Chlorophenyl phenyl ether	mg/kg	0 35 U	0.11 U	U 260.0	U 660.0
SW8270C 4	SW8270C   4-Methylphenol (P-Cresol)	mg/kg	NA	NA	NA	NA
SW8270C 4	4-Nitroaniline	mg/kg	1.8 U	0.16 U	0 15 U	0.15 U
	4-Nitrophenol	mg/kg	1.8 U	0.44 U	0 41 U	0.42 U
	4-Nitroquinoline-1-oxide	mg/kg	1.8 R	1.7 U	1.5 U	1.6 U
	5-Nitro-o-toluidine	mg/kg	0.7 U	0.37 U	0 34 U	0 35 U
	7,12-Dimethylbenzo(a)anthracene	mg/kg	0 7 U	0.56 U	0.52 U	0.53 U
ヿ	Acenaphthene	mg/kg	0 35 U	0,064 U	U 650.0	O 90'0
	Acenaphthylene	mg/kg	0.35 U	0.067 U	0.061 U	0.063 U
	Acetophenone	mg/kg	0.35 U	0 34 U	0 31 U	0.32 U
SW8270C a	alpha, alpha-Dimethylphenethylamine	mg/kg	1 8 U	1.8 U	1.6 U	1.7 U
SW8270C A	Anılıne (Phenylamine, Amınobenzene)	mg/kg	0 35 U	0.13 U	0.12 U	0.12 U
SW8270C Anthracene	Anthracene	mg/kg	0 35 U	0.089 U	0.081 U	0.083 U
SW8270C ≠	SW8270C Aramite (total)	mg/kg	0.7 U	0 43 U	0.39 U	0.4 Ū
SW8270C E	SW8270C Benzo(a)anthracene	mg/kg	0 35 U	0 064 U	O 059 U	O 90'0
SW8270C E	SW8270C Benzo(a)pyrene	mg/kg	0 35 U	0.07 U	O 590.0	O 990'0
SW8270C E	SW8270C Benzo(b)fluoranthene	mg/kg	0 35 U	0.13 U	0.12 U	0.12 U
	Benzo(g,h,i)perylene	mg/kg	0 35 U	0.18 U	0.17 U	0.17 U
	Benzo(k)fluoranthene	mg/kg	0.35 U	0.14 U	0.13 U	0.13 U
┪	Benzoic acid	mg/kg	1.8 U	0 21 U	U 61 0	0.19 U
一	Benzyi alcohol	mg/kg	0.35 U	0.12 R	0.11 R	0.12 R
7	Benzyl butyl phthalate	mg/kg	0.35 U	0.14 U	0.13 U	0.13 U
SW8270C	bis(2-Chloroethoxy)methane	mg/kg	0.35 U	0 072 U	0.066 U	0.067 U

Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

•			BHGLAOC1904 05 ft	RHGLAOC1995 00 ft	RHCI AOC1005 05 PK	BUCI 4001006 10 8
Method	Analyte	Unit	2000-05-15	2001-08-20	2001-08-20	2001-08-20
SW8270C	bis(2-Chloroethyl)ether (2-Chloroethyl ether)	mg/kg	0.35 U	0.11 U	0.1 U	0.1 U
SW8270C	bis(2-Ethylhexyl)phthalate	mg/kg	0.35 U	0.14 U	0 13 U	0.42
SW8270C	Chlorobenzilate	mg/kg	0.35 U	0.28 U	0 26 U	0.26 U
SW8270C	Chrysene	mg/kg	0.35 U	0.049 U	0.045 U	0.046 U
SW8270C	Cresols, m & p	mg/kg	0.35 U	0.14 U	0.13 U	0,13 U
SW8270C	Diallate (total of cis and trans isomers)	mg/kg	0.35 U	0.35 U	0 33 U	0.33 U
SW8270C	Dibenz(a,h)anthracene	mg/kg	0.35 U	0.14 U	0 13 U	0.13 U
SW8270C	Dibenzofuran	mg/kg	0 35 U	O 067 U	0.061 U	0.063 U
SW8270C	Diethyl phthalate	mg/kg	0.35 U	0.12 U	0 11 0	0.11 U
SW8270C	Dimethyl phthalate	mg/kg	0.35 U	0.091 U	0.084 U	0.085 U
2W8Z/0C	Di-n-butyl phthalate	mg/kg	0.35 U	0.087 U	0.08 U	0.082 U
SW8270C	Di-ti-octyl phthalate	mg/kg	0 35 U	0.32 U	0.3 U	030
SW8270C	Dinoseb	mg/kg	0.7 U	0.55 U	0 51 Ü	0.52 U
SW82/0C	Diphenylamine	mg/kg	0.35 U	0.25 U	0 23 U	0.23 U
SW8270C	_	mg/kg	0.35 U	0.4 U	0 37 U	0,37 U
SW8270C	Fluoranthene	mg/kg	0.35 U	0.11 U	0.1 U	0.11 U
SW8270C Fluorene	Fluorene	mg/kg	0 35 U	0.12 U	0.11 U	0 11 U
SW8270C	SW8270C Hexachlorobenzene	mg/kg	0.35 U	0.086 U	U 670 0	0.081 U
SW82/0C	SW82/0C Hexachlorobutadiene	mg/kg	0.35 U	0.084 U	0.077 U	0.078 U
SW8270C	SW8270C Hexachlorocyclopentadiene	mg/kg	0.35 U	0.15 U	0 14 U	0.14 U
SW8270C	SW8270C Hexachloroethane	mg/kg	0.35 U	0.095 U	0.087 U	0.089 U
		mg/kg	5.2 R	160	1.5 U	1.5 U
SW8270C	Hexachloropropene	mg/kg	18U	0.36 U	0.33 U	0.34 U
SW8270C	SW8270C Indeno(1,2,3-c,d)pyrene	mg/kg	0.35 U	0.14 U	0.13 U	0.13 U
	Isophorone	mg/kg	0.35 U	0.061 U	0 056 U	0.057 U
	Isosatrole	mg/kg	0.35 U	0.26 U	0.24 U	0 24 U
_	Methapyrilene	mg/kg	1.8 U	U 8.1	1.7 U	1.7 U
	Methyl methanesulfonate	mg/kg	0.7 U	040	0 37 U	0.38 U
SW8270C	Naphthalene	mg/kg	0 35 U	U 870.0	0.071 U	0.073 U
SW8270C	Nitrobenzene	mg/kg	0.35 U	U 970.0	0.07 U	0.072 U
_	N-Nitrosodiethylamine	mg/kg	0 7 U	0.41 U	0.38 U	0.38 U
	N-Nitrosodimethylamine	mg/kg	0.35 U	0.13 U	0.12 U	0.12 U
	N-Nitrosodi-n-butylamine	mg/kg	0 35 U	0 21 U	0.2 U	0.2 U
SW82/UC	N-Nitrosodi-n-propylamine	mg/kg	0 35 U	0.12 U	0.11 U	0.11 U

Table E.1 Comprehensive Soil Results AOC 19 NAS Fort Worth JRB, Texas

SW8270C N-Nitrosodphenylamine SW8270C N-Nitrosomethylethylamine SW8270C N-Nitrosomorpholine SW8270C N-Nitrosopiperidine SW8270C N-Nitrosopyrrolidine SW8270C O-Toluidine SW8270C O-Toluidine	/te	Unit	2000-05-15			•
SW8270C N-Nitrosodiph SW8270C N-Nitrosomor SW8270C N-Nitrosopipe SW8270C N-Nitrosopipe SW8270C O-Toluidine				2001-08-20	2001-08-20	2001-08-20
SW8270C N-Nitrosometl SW8270C N-Nitrosopipe SW8270C N-Nitrosopyre SW8270C O-Toludine		mg/kg	0 35 U	0.13 U	0.12 U	0.12 U
SW8270C N-Nitrosomor SW8270C N-Nitrosopyr SW8270C o-Toluidine SW8270C o-Toluidine		mg/kg	0.7 U	0.63 U	0 88 U	U 65.0
SW8270C N-Nitrosopipe SW8270C N-Nitrosopyr SW8270C o-Toluidine		mg/kg	0.7 U	0.48 U	0.44 U	0.45 U
SW8270C N-Nitrosopyrr SW8270C o-Toluidine		mg/kg	0.35 U	0.32 U	0.29 U	0 3 U
SW8270C o-Toluidine		mg/kg	1.8 U	Ω90	0.55 U	0.56 U
CIVO270C - DOCTOR		mg/kg	0.35 U	0.29 U	0.26 U	0.27 U
Swoziuciliylanı	SW8270C p-Dimethylaminoazobenzene	mg/kg	0.7 U	0.45 U	0.42 U	0 43 U
SW8270C Pentachlorobenzene		mg/kg	0.35 U	0.21 U	U 61.0	0.19 U
SW8270C Pentachloronitrobenzene		mg/kg	0 35 U	0 26 U	0.24 U	0.25 U
SW8270C Pentachlorophenol		mg/kg	1.8 U	0 22 U	0 21 U	0.21 U
SW8270C Phenacetin		mg/kg	0.7 U	0.47 U	0.43 U	0.44 U
SW8270C Phenanthrene		mg/kg	0.35 U	0.084 U	U 2/20 0	0.078 U
SW8270C Phenol		mg/kg	0.35 U	0.1 U	0 003 U	0 094 U
SW8270C p-Phenylenediamine		mg/kg	1 4 U	O 86:0	U 6.0	0.92 U
SW8270C Pronamide		mg/kg	0 7 U	0.5 U	0 46 U	0.46 U
SW8270C Pyrene		mg/kg	0 35 U	0 17 U	0.16 U	0.16 U
SW8270C Pyridine		mg/kg	0.7 R	0.12 U	0.11 U	0.12 U
SW8270C Safrole		mg/kg	0 35 U	0.22 U	0.21 U	0.21 U

Table E.1 Comprehensive Soil Results AOC 19 NAS Fort Worth JRB, Texas

			BHGLAOC1906 05 ft	BHGLAOC1906 10 ft	BHGLAOC1907 10 ft	BHGLAOC1907 10 ft
Method	Analyte	Unit	2001-08-20	2001-08-20	2001-08-20	2001-08-20 Dup
	Arsenic	mg/kg	NA	NA	NA	NA
	Barium	mg/kg	NA	NA	NA	NA
$\overline{}$	Beryllium	mg/kg	NA	NA	NA	NA
	Cadmium	mg/kg	NA	NA	NA	NA
	Chromium, total	mg/kg	NA	NA	NA	NA
	Cobalt	mg/kg	NA	NA	NA	NA
	Copper	mg/kg	NA	NA	NA	NA
	Nickel	mg/kg	NA	NA	NA	ĄN
	Tm	mg/kg	NA	NA	NA	NA
- Т	Vanadıum	mg/kg	NA	NA	NA	NA
<u></u>	Zinc	mg/kg	NA	NA	NA	AN
	Antimony	mg/kg	NA	NA	NA	ĄN
$\neg$	Lead	mg/kg	NA	NA	NA	NA
↲	Mercury	mg/kg	NA	NA	NA	AN
	Selenium	mg/kg	NA	ΑN	NA	AN
T	Silver	mg/kg	NA	NA	NA	NA
_	Thallium	mg/kg	NA	NA	NA	NA
$\neg$	1,1,1,2-Tetrachloroethane	mg/kg	NA	NA	NA	NA
$\neg$	I,I,I-Trichloroethane	mg/kg	NA	NA	NA	NA
_†	1,1,2,2-Tetrachloroethane	mg/kg	NA	NA	NA	NA
┪	1,1,2-Trichloroethane	mg/kg	NA	NA	NA	AN
_	1,1-Dichloroethane	mg/kg	NA	NA	NA	NA
	1,1-Dichloroethene	mg/kg	NA	NA	NA	NA
┪	1,2,3-Trichloropropane	mg/kg	NA	NA	NA	NA
_	1,2-Dibromo-3-chloropropane	mg/kg	NA	NA	AN	NA
$\neg$	1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	NA	NA	NA
寸	1,2-Dichloroethane	mg/kg	NA	NA	NA	NA
┪	1,2-Dichloropropane	mg/kg	NA	NA	NA	ΝΑ
7	2-Chloro-1,3-butadiene	mg/kg	NA	NA.	NA	NA
$\neg$	2-Hexanone	mg/kg	NA	NA	NA	NA
	Acetone	mg/kg	NA	NA	NA	NA NA
┪	Acetonitrile	mg/kg	NA	NA	NA	NA .
$\neg$	Acrolein	mg/kg	NA	NA	NA	NA
SW826UB	Acrylonitrile	mg/kg	NA	NA	NA	NA

,			BHGLAOC1906 05 ft	BHGLAOC1906 10 ft	BHGLAOC1907 10 ft	BHGLAOC1907 10 ft
Method	Analyte	Unit	2001-08-20	2001-08-20	2001-08-20	2001-08-20 Dup
SW8260B	Allyl chloride (3-Chloropropene)	mg/kg	NA	NA	NA	NA
	Benzene	mg/kg	NA	NA	NA	NA
	Bromodichloromethane	mg/kg	NA	VN	NA	NA
SW8260B	Вготобогт	mg/kg	NA	WA	NA	NA
SW8260B	Bromomethane	mg/kg	NA	VN	NA	NA
	Carbon disulfide	mg/kg	NA	VN	NA	NA
	oride	mg/kg	NA	VN	NA	NA
	le	mg/kg	NA	NA	NA	NA
SW8260B	e	mg/kg	NA	ΨN	NA	NA
$\overline{}$		mg/kg	NA	NA	NA	NA
		mg/kg	NA	NA	NA	NA
		mg/kg	NA	VN	NA	NA
SW8260B	cis-1,3-Dıchloropropene	mg/kg[	NA	VN	NA	NA .
SW8260B	ethane	mg/kg	NA	VN	NA	NA
SW8260B	Dibromomethane	mg/kg	NA	VN	NA	NA
	ethane	mg/kg	NA	NA	NA	NA
	rylate	mg/kg	NA	NA	NA	NA
$\neg$		mg/kg	NA	NA	NA	NA
╗	ine (Methyl jodide)	mg/kg	NA	NA	NA	NA
		mg/kg	NA	NA	NA	NA
T		mg/kg	NA	NA	NA	NA
$\neg$		mg/kg	NA	W	NA	NA
$\neg$	ne (4-Methyl-2-pentanone)	mg/kg	NA	NA	NA	NA
$\neg$	٥	mg/kg	NA	NA	NA	NA
$\neg$		mg/kg	NA	NA	NA	NA
П	Methylene chloride	mg/kg	NA	NA	NA	NA
7	o-Xylene (1,2-Dimethylbenzene)	mg/kg	NA	NA	NA	NA
一	Pentachloroethane	mg/kg	NA	NA	NA	NA
ヿ	Propane nitrile (Propionitrile)	mg/kg	NA	NA	NA	NA
$\neg$	Styrene	mg/kg	NA	NA	NA	NA
ヿ゙	Tert-Butyl Methyl Ether	mg/kg	NA	NA	NA	NA
	Tetrachloroethene (PCE)	mg/kg	NA	NA	NA	NA
$\neg$	Toluene	mg/kg	NA	NA	NA	NA
SW8260B	Trans-1,2-Dichloroethene	mg/kg	NA	NA	NA	NA

Table E.1 Comprehensive Soil Results AOC 19 NAS Fort Worth JRB, Texas

,	. X		BHGLAOC1906 05 ft	BHGLAOC1906 10 ft	RHGLAOC1907 10 #	RHCLAOC1907 10 F
Method	Analyte	Unit	2001-08-20	2001-08-20	2001-08-20	2001-08-20 Dup
SW8260B	Trans-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA
SW8260B	Trans-1,4-Dichloro-2-Butene	mg/kg	NA	NA	AN	NA
SW8260B	Trichloroethene (TCE)	mg/kg	0 033	0.008 J	0.0006 U	0.0005 U
SW8260B	Trichlorofluoromethane	mg/kg	NA	NA	NA	NA
SW8260B	Vinyl acetate	mg/kg	NA	NA	NA	NA
SW8260B	Vinyl chloride	mg/kg	NA	NA	NA	NA
SW8270C	1,2,4,5-Tetrachlorobenzene	mg/kg	NA	NA	NA	NA
SW8270C	1,2,4-Trichlorobenzene	mg/kg	NA	NA	NA	NA
SW8270C	1,2-Dichlorobenzene	mg/kg	NA	NA	AN	NA
SW8270C	1,3,5-Trinitrobenzene	mg/kg	NA	NA	NA	NA
SW8270C	1,3-Dichlorobenzene	mg/kg	NA	NA	NA	NA
SW8270C	1,3-Dinitrobenzene	mg/kg	NA	NA	AN	NA
SW8270C	1,4-Dichlorobenzene	mg/kg	NA	NA	AN	ΑX
SW8270C	1,4-Dioxane (p-Dioxane)	mg/kg	NA	NA	NA	AX
SW8270C	1,4-Naphthoquinone	mg/kg	NA	NA	NA	NA
SW8270C	1-Naphthylamıne	mg/kg	NA	AN	NA	ĄN
SW8270C	2,2'-Oxybis(1-chloropropane)	mg/kg	NA	NA	NA	NA
- 1	2,3,4,6-Tetrachlorophenol	mg/kg	NA	ΝĀ	NA	NA
- 1	2,4,5-Trichlorophenol	mg/kg	NA	NA .	NA	NA
SW8270C	2,4,6-Trichlorophenol	mg/kg	NA	NA	NA	NA
Т	2,4-Dichlorophenol	mg/kg	NA	VN	NA	NA
Г	2,4-Dimethylphenol	mg/kg	NA	NA	NA	NA
	2,4-Dinitrophenol	mg/kg	NA	NA	NA	NA
	2,4-Dinitrotoluene	mg/kg	NA	NA	NA	NA
	2,6-Dichiorophenol	mg/kg	NA	NA	NA	NA
	2,6-Dinitrofoluene	mg/kg	NA	NA	NA	NA
SW82/0C	2-Acetylaminofluorene	mg/kg	NA	NA	NA	NA
SW82/0C	2-Ammonaphthalene (beta-Naphthylamine)	mg/kg	NA	NA	NA	NA
SW82/0C	2-Chloronaphthalene	mg/kg	NA	NA	NA	NA
SW8270C	2-Chlorophenol	mg/kg	NA	NA	AN	ΥN
SW8270C	2-Methylnaphthalene	mg/kg	NA	NA	NA	NA
	2-Methylphenol (0-Cresol)	mg/kg	NA	NA	NA	NA
	2-Nitroaniline	mg/kg	NA	NA	NA	NA
SW8270C	2-Nitrophenol	mg/kg	NA	NA	NA	NA

*			BHGLAOC1906 05 ft	BHGLAOC1906 10 ft	BHGLAOC1907 10 ft	BHGLAOC1907 10 ft
Method	Analyte	Unit	2001-08-20	2001-08-20	2001-08-20	2001-08-20 Dup
SW8270C	2-Picoline (alpha-Picoline)	mg/kg	NA	W	NA	NA
SW8270C	3,3'-Dichlorobenzidine	mg/kg	NA	VN	NA	NA
SW8270C	3,3'-Dimethylbenzidine	mg/kg	NA	NA	NA	NA
SW8270C	3-Methylcholanthrene	mg/kg	NA	NA	NA	NA
SW8270C	3-Nitroaniine	mg/kg	NA	NA	NA	NA
	4,6-Dimtro-2-methylphenol	mg/kg	NA	NA	NA	NA
SW8270C	4-Aminobiphenyl (4-Biphenylamine)	mg/kg	NA	NA	NA	NA
SW8270C	4-Bromophenyl phenyl ether	mg/kg	NA	NA	VN	NA
SW8270C	4-Chloro-3-methylphenol	mg/kg	NA	WA	NA	NA
SW8270C	4-Chloroaniline	mg/kg	NA	NA	VΝ	NA
SW8270C	SW8270C [4-Chlorophenyl phenyl ether	mg/kg	NA	NA	VN	NA
SW8270C	SW8270C [4-Methylphenol (P-Cresol)	mg/kg	NA	NA	W	NA
SW8270C		mg/kg	NA	NA	NA	NA
SW8270C	4-Nitrophenol	mg/kg	NA	VN	VN	AN
	4-Nitroquinoline-1-oxide	mg/kg	NA	VN	NA	NA
SW8270C	5-Nitro-o-toluidine	mg/kg	NA	NA	NA	NA
SW8270C	7,12-Dunethylbenzo(a)anthracene	mg/kg	NA	NA	NA NA	NA
SW8270C	Acenaphthene	mg/kg	NA	NA	] W	NA
SW8270C	Acenaphthylene	mg/kg	NA	NA	NA NA	NA
SW8270C	Acetophenone	mg/kg	NA	NA	NA NA	NA
SW8270C	alpha, alpha-Dimethylphenethylamine	mg/kg	NA	NA	NA	NA
SW8270C	Anılıne (Phenylamıne, Aminobenzene)	mg/kg	NA	NA	VN	NA
SW8270C	Anthracene	mg/kg	NA	NA	VN	NA
SW8270C	Aramite (total)	mg/kg	NA	NA	NA	NA
	Benzo(a)anthracene	mg/kg	NA	NA	NA	NA
	Benzo(a)pyrene	mg/kg	NA	NA	WA	NA
SW8270C	Benzo(b)fluoranthene	mg/kg	NA	NA	NA AN	NA
	Benzo(g,h,ı)perylene	mg/kg	NA	NA	NA NA	NA
SW8270C	Benzo(k)fluoranthene	mg/kg	NA	NA	<b>VN</b>	NA
SW8270C	Benzoic acid	mg/kg	NA	NA	AN	NA
SW8270C	Benzyl alcohol	mg/kg	NA	NA	NA	NA
SW8270C	Benzyl butyl phthalate	mg/kg	NA	NA	NA	NA
SW8270C	bis(2-Chloroethoxy)methane	mg/kg	NA	NA	NA	NA

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BHGLAOC1907 10 ft	2001-08-20 Dup	NA	NA	NAN	NA	NA AN	NA NA	NA	ΨN	AN	AN	NA	NA	NA NA	NA N	NA NA	N AN	AN	AN	NA	V X	AN	NA NA	AN	YZ.	AN	NA	AN	NA	NA	Ϋ́N	AN	AN	NA	NA			
BHGLAOC1907 10 ft	2001-08-20	NA	NA	NA	NA V	N.	NA NA	NA	NA	AN	ΨN	NA	NA	AN	NA	NA	NA	Ϋ́N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
BHGLAOC1906 10 ft	2001-08-20	NA	AN	Ϋ́	Ϋ́	NA	NA	Ϋ́Z	Ϋ́N	A.Z.	NA AN	NA	NA	NA	٧X	NA	ΥN	NA	NA	NA	NA	ΑN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
BHGLAOC1906 05 ft	2001-08-20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	VA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
~ .	Cint	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg			
A Section A	Analyte	bis(2-Chloroethyl)ether (2-Chloroethyl ether)	bis(2-Ethylhexyl)phthalate	Chlorobenzulate	Chrysene	Cresols, m & p	Diallate (total of cis and trans isomers)	Dibenz(a,h)anthracene	Dibenzofuran	Diethyl phthalate	Dimethyl phthalate	Dı-n-butyl phthalate	Di-n-octyl phthalate	Dinoseb	Diphenylamıne	Ethyl methanesulfonate	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Hexachlorophene	Hexachloropropene	Indeno(1,2,3-c,d)pyrene	Isophorone	Isosafrole	Methapyrılene	Methyl methanesulfonate	Naphthalene	Nitrobenzene	N-Nitrosodiethylamine	N-Nitrosodimethylamine	N-Nitrosodi-n-butylamine	N-Nitrosodi-n-propylamine			
Method	7	7		$\neg$	╗		T	▔▔				_	_			╗	T	-		7		Т	$\neg$	$\neg$		Т	$\neg$	7	T	_	T	7	7	_	SW82/0C IN			

Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

*			BHGLA0C1906 05 ft	BHGLA0C1906 10 ft	BHGLAOC1907 10 ft	BHGLAOC1907 10 ft
Method	Analyte	Unit	2001-08-20	2001-08-20	2001-08-20	2001-08-20 Dup
SW8270C	SW8270C N-Nitrosodiphenylamine	mg/kg	VN	NA	VN	NA
SW8270C	SW8270C N-Nitrosomethylethylamine	mg/kg	VN.	NA	VN	NA
SW8270C	SW8270C N-Ntrosomorpholine	mg/kg	VN	NA	VN	NA
SW8270C	SW8270C N-Nitrosopiperidine	mg/kg	VN	VN	VN	NA
SW8270C	SW8270C N-Nitrosopyrrolidine	mg/kg	VN	NA	AN	NA
SW8270C	SW8270C o-Toluidine	mg/kg	VN	NA	VN	NA
SW8270C	SW8270C p-Dimethylaminoazobenzene	mg/kg	VN	VV	VN	VN
SW8270C	SW8270C Pentachlorobenzene	mg/kg	AN	NA	VN	NA
SW8270C	SW8270C Pentachloronitrobenzene	mg/kg	NA	NA	VN	AN
SW8270C	SW8270C Pentachlorophenol	mg/kg	VN	NA	NA	NA
SW8270C	SW8270C Phenacetin	] mg/kg	VN	NA [	VN	NA
SW8270C	SW8270C Phenanthrene	mg/kg	NA	NA	VN	NA
SW8270C Phenol	Phenol	mg/kg	NA	NA	NA	NA
SW8270C	SW8270C   p-Phenylenediamine	mg/kg	NA	NA	VN	NA
SW8270C	SW8270C Pronamide	mg/kg	NA	NA	NA	NA
SW8270C Pyrene	Pyrene	mg/kg	NA	NA	[ VN	NA
SW8270C Pyridine	Pyridine	mg/kg	NA	NA	NA	NA
SW8270C Safrole	Safrole	mg/kg	VΑ	VA	AN	ΝΑ

Table E.1 Comprehensive Soil Results AOC 19 NAS Fort Worth JRB, Texas

			BHGLAOC1908 00 ft	BHGLAOC1908 05 ft	BHGLAOC1908 10 ft	BHGLAOC1909 05 6
Method	Analyte	Unit	2001-08-21	2001-08-21	2001-08-21	2001-08-22
SW6010B	Arsenic	mg/kg	4.2 F	27F	3.7 F	NA
SW6010B	$\neg$	mg/kg	80.3	92	53.5	NA
SW6010B	╗	mg/kg	64 0	98 0	0.64	NA
SW6010B	$\neg$	mg/kg	0.093 U	0.11 U	0.11 U	NA
SW6010B	$\neg$	mg/kg	12.8	17.7	13	NA
SW6010B		mg/kg	54F	33F	2.9 F	NA
SW6010B	$\neg$	mg/kg	86F	89F	4.4 F	NA
SW6010B		mg/kg	10 8	9.4 F	7.6 F	NA
SW6010B		mg/kg	1.6 U	190	2 1 U	NA
SW6010B		mg/kg	25.1 F	25 F	25 F	NA
SW6010B	Zinc	mg/kg	20 3 U	25.5 U	16 7 U	ΥN
SW7041	Antimony	mg/kg	0.43 F	0.23 F	0.24 UJ	NA
SW7421	Lead	mg/kg	11.1	10.1	6.4	NA
SW7471A	┱	mg/kg	0.013 F	0.0062 U	0.0065 U	NA
SW7740	Selenium	mg/kg	0.2 UJ	0 18 UJ	0.2 UJ	NA
SW7761	Silver	mg/kg	0.082 UJ	0.075 UJ	0 084 UJ	NA
SW7841	T	mg/kg	0 23 U	0.21 UJ	0 24 UJ	NA
SW8260B	$\neg$	mg/kg	0.0008 U	U 2000.0	0 0007 U	NA
SW8260B	-	mg/kg	0.0007 U	0.0006 U	0.0006 U	ΑN
SW8260B		mg/kg	0.0007 U	0.0006 U	0.0006 U	NA
SW8260B		mg/kg	0.0008 U	0.0007 U	0.0007 U	NA
SW8260B	_	mg/kg	0.001 U	0.0008 U	0.0008 U	NA
SW8260B		mg/kg	0.001 U	0.0009 U	U 6000.0	NA
SW8260B		mg/kg	0.001 U	0.001 U	0.001 U	NA
SW8260B	┱	mg/kg	0.001 U	0.001 U	0.001 U	NA
SW8260B	1	mg/kg	O 0000 U	0.0007 U	0.0007 U	NA
SW8260B	_	mg/kg	0 0007 U	0.0005 U	0 0005 U	NA
SW8260B	$\neg$	mg/kg	0.001 U	0.0009 U	Ω 6000 0	NA
SW8260B	T	mg/kg	0 0008 U	0 9000 O	U 9000 U	NA
SW8260B	2-Hexanone	mg/kg	0 002 U	0.002 U	0.002 U	NA
SW8260B	Acetone	mg/kg	O 008 U	0.004 U	0.004 U	NA
SW8260B	Acetonitrile	mg/kg	0 029 U	0.024 U	0.024 U	NA
SW8260B	Acrolein	mg/kg	0.043 U	0.035 U	0.035 U	NA
SW8260B	Acrylonitrile	mg/kg	0 008 U	0.007 U	0.007 U	NA.

Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

			BHGLAOC1908 00 ft	BHGLAOC1908 05 ft	BHGLAOC1908 10 ft	BHGLAOC1909 05 ft
Method	Analyte	Unit	2001-08-21	2001-08-21	2001-08-21	2001-08-22
SW8260B	Allyl chloride (3-Chloropropene)	mg/kg	0.002 U	0.002 U	0.002 U	NA
SW8260B	Benzene	mg/kg	0.0007 U	0.0006 U	0.0006 U	NA
SW8260B	Bromodichloromethane	mg/kg	0.0008 U	0.0006 U	Ω 9000 0	NA
SW8260B	Bromoform	mg/kg	0.001 U	U 8000.0	U 8000.0	AN
SW8260B	Bromomethane	mg/kg	0.003 R	0 003 R	0.003 R	NA
SW8260B	Carbon disulfide	mg/kg	0.002 U	0.002 U	0.002 U	NA
SW8260B	Carbon tetrachloride	mg/kg	0.0009 U	O 8000 O	O 8000:0	NA
SW8260B	Chlorobenzene	mg/kg	0.001 U	O 8000 O	U 8000.0	NA
SW8260B	Chloroethane	mg/kg	0.002 R	0.001 R	0.001 R	NA
SW8260B	Chloroform	mg/kg	0 0007 U	O 9000 O	O 9000'0	NA
SW8260B	Chloromethane	mg/kg	0.001 R	0.0009 R	0.0009 R	NA
SW8260B	cis-1,2-Dichloroethene	mg/kg	0.001 U	O 001 U	200 0	AN
SW8260B	cis-1,3-Dichloropropene	mg/kg	0.0009 U	0 0000 n	U 2000.0	NA
SW8260B	Dibromochloromethane	mg/kg	0.0008 U	0.0006 U	Ω 9000'0	NA
SW8260B	Dibromomethane	mg/kg	0.0008 U	O 9000 O	0.0006 U	NA
SW8260B	Dichlorodifluoromethane	mg/kg	0.0008 U	0.0007 U	U 2000.0	Ϋ́Α
SW8260B	Ethyl methacrylate	mg/kg	0 002 U	0.001 U	0 001 U	NA
SW8260B	Ethylbenzene	mg/kg	0.001 U	0.001 U	0 001 U	NA
SW8260B	Iodomethane (Methyl 10d1de)	mg/kg	0.004 U	0.003 U	0.003 U	NA
SW8260B	Isobutanol	mg/kg	0.095 U	0.078 U	0 078 U	NA
SW8260B	m,p-Xylene (sum of isomers)	mg/kg	0.002 U	0.002 U	0.002 U	NA
SW8260B	Methyl ethyl ketone (2-Butanone)	mg/kg	0.005 U	0.004 U	0.004 U	NA
SW8260B	Methyl isobutyl ketone (4-Methyl-2-pentanone)	mg/kg	0 003 U	0.003 U	O 003 U	NA
SW8260B	Methyl methacrylate	mg/kg	0 002 U	0.002 U	0 002 U	NA
SW8260B	Methylacrylonitrile	mg/kg	0 005 U	0.004 U	0 004 U	NA
SW8260B	Methylene chloride	mg/kg	0.002 U	0 002 U	0.002 U	NA
SW8260B	o-Xylene (1,2-Dimethylbenzene)	mg/kg	0.001 U	0.0009 U	0.0009 U	NA
SW8260B	Pentachloroethane	mg/kg	0 000 U	0.005 U	0.005 U	NA
SW8260B	Propane nitrile (Propionitrile)	mg/kg	0.021 U	0 018 U	0.018 U	NA
SW8260B	Styrene	mg/kg	0.001 U	0 0000 O	N 6000 0	NA NA
SW8260B	Tert-Butyl Methyl Ether	mg/kg	0 0007 U	0.0006 U	0.0006 U	NA
SW8260B	Tetrachloroethene (PCE)	mg/kg	0 0008 U	0.0006 U	0.0006 U	NA
SW8260B	Toluene	mg/kg	0.001 U	0.0009 U	0.0009 U	NA
SW8260B	Trans-1,2-Dichloroethene	mg/kg	0.001 U	0.0009 U	0.0009 U	NA

Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

,	The second secon		BHGLAOC1908 00 ft	BHGLAOC1908 05 ft	BHGLAOC1908 10 ft	BHGLAOC1909 05 ft
Method	Analyte	Unit	2001-08-21	2001-08-21	2001-08-21	2001-08-22
SW8260B	Trans-1,3-Dichloropropene	mg/kg	0.0009 U	0.0008 U	0 0008 U	NA
SW8260B		mg/kg	0.002 U	0.002 U	0 002 U	NA
SW8260B	_	mg/kg	0.0007 U	0.0005 U	0.03	NA
SW8260B		mg/kg	0 0008 U	0 0007 U	U 7000 0	NA
SW8260B	$\neg$	mg/kg	0.0006 U	0 0005 U	0.0005 U	NA
SW8260B	$\overline{}$	mg/kg	0 0008 U	0.0007 U	0 0007 U	NA
SW8270C		mg/kg	0 22 U	0.21 U	0.22 U	0.19 U
SW8270C		mg/kg	0 058 U	0.055 U	0.058 U	0.051 U
SW8270C	1,2-Dichlorobenzene	mg/kg	0.1 U	0.097 U	0.1 U	0.09 R
SW8270C	SW8270C 1,3,5-Trinitrobenzene	mg/kg	0.88 U	0.83 U	0.88 U	0.77 U
SW8270C	SW8270C 1,3-Dichlorobenzene	mg/kg	0.11 U	0.11 U	0.11 U	0.097 U
SW8270C		mg/kg	0.4 U	0.38 U	040	0.35 U
	_	mg/kg	0 088 U	0.084 U	0.088 U	0.077 U
SW8270C	$\neg$	mg/kg	0 96 U	0.91 U	0.96 U	0.84 U
SW8270C	_	mg/kg	1 5 U	1 4 U	150	1.3 U
SW8270C	1-Naphthylamine	mg/kg	0.61 U	0.58 U	0.61 U	0.53 U
SW8270C	2,2'-Oxybis(1-chloropropane)	mg/kg	0.21 U	U 61.0	0.2 U	0.18 U
SW8270C		mg/kg	0.33 U	0.32 U	0.33 U	0.29 U
SW8270C		mg/kg	0.08 U	0 076 U	O 80'0	0.07 U
SW8270C	2,4,6-Trichlorophenol	mg/kg	0.081 U	0.077 U	0 081 U	0 071 U
SW8270C	SW8270C 2,4-Dichlorophenol	mg/kg	0.068 U	0 064 U	0.068 U	0.059 U
SW8270C	SW8270C 2,4-Dimethylphenol	mg/kg	0.27 U	0.25 U	0.27 U	0.23 U
SW8270C	2,4-Duntrophenol	mg/kg	0.23 U	0.22 U	0.23 U	0 21 U
		mg/kg	0.088 U	0 084 U	0.088 U	0.077 U
SW8270C		mg/kg	0 26 U	0.25 U	0.26 U	0.23 U
		mg/kg	0.093 U	0.088 U	0.093 U	0.081 U
SW8270C	2-Acetylaminofluorene	mg/kg	0.64 U	0.61 U	0.64 U	0 95 O
SW8270C	2-Ammonaphthalene (beta-Naphthylamine)	mg/kg	0.62 U	0.58 U	0.61 U	0.54 U
SW8270C	2-Chloronaphthalene	mg/kg	0.064 U	0.061 U	0.064 U	O 056 U
SW8270C	2-Chlorophenol	mg/kg	0 082 U	0.078 U	0.082 U	0.072 U
SW8270C	2-Methylnaphthalene	mg/kg	0.28 U	0 27 U	0.28 U	0.25 U
SW8270C	2-Methylphenol (o-Cresol)	mg/kg	0.15 U	0.14 U	0.15 U	0 13 U
SW8270C	2-Nitroaniline	mg/kg	0.13 U	0.12 U	0.13 U	0 11 U
SW8270C	2-Nitrophenol	mg/kg	0 092 U	0.087 U	0.092 U	0.08 U

Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

-			BHGLAOC1908 00 ft	BHGLAOC1908 05 ft	BHGLAOC1908 10 ft	BHGL AOC1909 05 ft
Method	Analyte	Unit	2001-08-21	2001-08-21	2001-08-21	2001-08-22
SW8270C	$\neg$	mg/kg	0 27 U	0 25 U	0 27 U	0.23 U
SW8270C		mg/kg	0 14 U	0 13 U	0.14 U	0.12 U
SW8270C	$\neg$	mg/kg	0 36 U	0.34 U	0 36 U	0.32 U
SW8270C	┪	mg/kg	0.36 U	0 34 U	0 36 U	0 32 U
SW8270C	3-Nitroaniline	mg/kg	0 17 U	0 16 U	0.17 U	0.15 U
SW8270C	4,6-Dinitro-2-methylphenol	mg/kg	0.17 U	0.16 U	0 17 U	0.15 U
SW8270C	4-Aminobiphenyl (4-Biphenylamine)	mg/kg	0.34 U	0.32 U	0.34 U	0 3 U
SW8270C		mg/kg	0.11 U	0.1 U	0.11 U	0 960 O
SW8270C		mg/kg	0.1 U	0.096 U	0.1 U	0.089 U
SW8270C		mg/kg	0.15 U	0 14 U	0.15 U	0 13 U
SW8270C	_	mg/kg	0 1 U	U 860'0	010	0.091 U
SW8270C		mg/kg	NA	NA	AN	NA
SW8270C	4-Nitroaniline	mg/kg	0.16 U	0.15 U	0.16 U	0.14 U
SW8270C	4-Nitrophenol	mg/kg	0.44 U	0 41 U	0.44 U	0.38 U
SW8270C	SW8270C 4-Nitroguinoline-1-oxide	mg/kg	1.6 U	150	1.6 U	1.4 R
SW8270C		mg/kg	0 37 U	0 35 U	0.37 U	0.32 U
SW8270C		mg/kg	0.55 U	0.52 U	0.55 U	0.48 U
SW8270C		mg/kg	0 063 U	0.06 U	0.063 U	0.055 U
SW8270C	Acenaphthylene	mg/kg	0.066 U	0.062 U	0.065 U	0.057 U
SW8270C	Acetophenone	mg/kg	0.34 U	0.32 U	0.33 U	0.29 U
SW8270C	alpha, alpha-Dimethylphenethylamine	mg/kg	1.8 U	1.7 U	1.8 U	1.5 U
SW8270C	Anılıne (Phenylamıne, Amınobenzene)	mg/kg	0.13 U	0.12 U	0.13 U	0.11 U
SW8270C	Anthracene	mg/kg	0.087 U	0 083 U	0.087 U	U 9/0 0
SW8270C	Aramite (total)	mg/kg	0.42 U	0.4 U	0.42 U	0.37 U
SW8270C	Benzo(a)anthracene	mg/kg	0 063 U	0.06 U	0 063 U	0.055 U
SW8270C	Вепzo(a)pyrene	mg/kg	0 069 U	0.066 U	U 690.0	0 061 U
SW8270C		mg/kg	0.13 U	0.12 U	0.13 U	0.11 U
SW8270C	Benzo(g,h,i)perylene	mg/kg	0.18 U	0.17 U	0.18 U	0.16 U
SW8270C	SW8270C Benzo(k)fluoranthene	mg/kg	0.14 U	0.13 U	0.14 U	0.12 R
SW8270C		mg/kg	0.2 U	0.19 U	0 2 U	0.18 R
SW8270C	Benzyl atcohol	mg/kg	0 12 R	0.12 R	0.12 R	0.11 U
SW8270C		mg/kg	0.14 U	0 13 U	0.14 U	0.12 U
SW8270C	bis(2-Chloroethoxy)methane	mg/kg	0.07 U	0.067 U	0.07 U	0.062 U

Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

¥			BHGLAOC1908 00 ft	BHGLAOC1908 05 ft	BHGLAOC1908 10 ft	BHGLAOC1909 05 ft
Method	Analyte	Unit	2001-08-21	2001-08-21	2001-08-21	2001-08-22
T.	bis(2-Chloroethyl)ether (2-Chloroethyl ether)	mg/kg	0.11 U	0.1 U	0.11 U	0.095 U
$\overline{}$	bis(2-Ethylhexyl)phthalate	mg/kg	0.13 U	0.13 U	0.13 U	0.12 U
SW8270C	Chlorobenzilate	mg/kg	0.27 U	0.26 U	0 27 U	0.24 U
SW8270C	Chrysene	mg/kg	0 048 U	0.045 U	0.048 U	0.042 U
$\neg$ r	Cresols, m & p	mg/kg	0.14 U	0.13 U	0 14 U	0.12 U
-r	Diallate (total of cis and trans isomers)	mg/kg	0.35 U	0.33 U	0.35 U	03U
$\neg$	Dibenz(a,h)anthracene	mg/kg	0 13 U	0.13 U	0.13 U	0.12 U
	Dibenzofuran	mg/kg	0.066 U	0.062 U	0 065 U	0.057 U
Т	Diethyl phthalate	mg/kg	0.11 U	0.11 U	0.11 U	N 660 0
	Dimethyl phthalate	mg/kg	0.089 U	0.085 U	O 680 0	0.078 U
	Di-n-butyl phthalate	mg/kg	0.086 U	0.081 U	0 086 U	0.075 U
T	Di-n-octyl phthalate	mg/kg	0.32 U	0.3 U	0.32 U	0.28 U
T	Dinoseb	mg/kg	0 54 U	0.51 U	0.54 U	0.47 U
SW8270C	Diphenylamine	mg/kg	0.24 U	0.23 U	0 24 U	0.21 U
T	Ethyl methanesulfonate	mg/kg	0.39 U	0.37 U	0 39 U	0.34 U
T	Fluoranthene	mg/kg	0.11 U	0.11 U	0 11 U	O 860 O
Т	Fluorene	mg/kg	0.12 U	0.11 U	0.12 U	0.1 U
	Hexachlorobenzene	mg/kg	0.085 U	0.08 U	0 085 U	0.074 U
$\neg$	Hexachlorobutadiene	mg/kg	0.082 U	U 870.0	0 082 U	0 072 U
$\neg$	Hexachlorocyclopentadiene	mg/kg	0 14 U	0.14 U	0.14 U	0.13 U
$\neg$	Hexachloroethane	mg/kg	0.093 U	0.088 U	0 093 U	0 081 U
П	Hexachlorophene	mg/kg	1.6 U	1.5 U	150	1.4 U
T	Hexachloropropene	mg/kg	0.36 U	0 34 U	0.36 U	0.31 U
$\neg$	Indeno(1,2,3-c,d)pyrene	mg/kg	0.13 U	0.13 U	0.13 U	0.12 U
$\neg$	Isophorone	mg/kg	0.06 U	0.057 U	0.06 U	0.052 U
$\neg$	Isosatrole	mg/kg	0.26 U	0.24 U	0 26 U	0.22 U
$\neg$	Methapyrilene	mg/kg	18U	1.7 U	1.8 U	1.5 U
Т	Methyl methanesulfonate	mg/kg	0.4 U	0.38 U	0 4 U	0.35 U
_	Naphthalene	mg/kg	0.076 U	0.072 U	0 076 U	0.067 U
_	Nitrobenzene	mg/kg	0.075 U	0 071 U	0 075 U	0.066 U
$\neg$	N-Nitrosodiethylamine	mg/kg	0 4 U	0.38 U	0.4 U	0.35 U
_	N-Nitrosodimethylamine	mg/kg	0.13 U	0.12 U	0.13 U	0.11 U
	N-Nitrosodi-n-butylamine	mg/kg	0.21 U	0 2 U	0.21 U	0 18 U
SW8270C	N-Nitrosodi-n-propylamine	mg/kg	0.12 U	0.11 U	0.12 Ü	0.11 U

Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

			BHGLAOC1908 00 ft	BHGLAOC1908 05 ft	BHGLAOC1908 10 ft	BHGLAOC1909 05 ft
Method	Analyte	Unit	2001-08-21	2001-08-21	2001-08-21	2001-08-22
SW8270C	SW8270C N-Nitrosodiphenylamine	mg/kg	0 13 U	0 12 U	0.13 U	0.11 U
SW8270C	SW8270C N-Nitrosomethylethylamine	mg/kg	0.62 U	0 59 U	0 62 U	0.54 U
SW8270C	SW8270C N-Nitrosomorpholine	mg/kg	0.47 U	0.44 U	0.47 U	0.41 U
SW8270C	SW8270C N-Nitrosopiperidine	mg/kg	0.31 U	0.3 U	0.31 U	0.27 U
SW8270C	SW8270C N-Nitrosopyrrolidine	mg/kg	0 59 U	0 56 U	0 65 U	0.52 U
SW8270C	SW8270C o-Toluidine	mg/kg	0.28 U	0.27 U	0 28 U	0.25 U
SW8270C	SW8270C p-Dimethylaminoazobenzene	mg/kg	0.45 U	0.42 U	0.45 U	0.39 U
SW8270C	SW8270C Pentachlorobenzene	mg/kg	0.2 U	0.19 U	0.2 U	0.18 U
SW8270C	SW8270C Pentachloronitrobenzene	mg/kg	0 26 U	0.24 U	0.26 U	0.23 U
SW8270C	SW8270C Pentachtorophenol	mg/kg	$0.22  \overline{\mathrm{U}}$	0.21 U	0.22 U	0.19 U
SW8270C	SW8270C Phenacetin	mg/kg	0.46 U	0.44 U	0.46 U	0.41 U
SW8270C	SW8270C Phenanthrene	mg/kg	0.082 U	U 8/0.0	0 082 U	0.072 U
SW8270C Phenol	Phenol	mg/kg	0.099 U	0.094 U	U 660.0	0.087 U
SW8270C	SW8270C p-Phenylenediamine	mg/kg	Ω 96.0	U 16.0	U 96.0	0 84 U
SW8270C	SW8270C Pronamide	mg/kg	0.49 U	0.46 U	0.49 U	0 43 U
SW8270C Pyrene	Pyrene	mg/kg	0.17 U	0.16 U	0.17 U	0 15 U
SW8270C Pyridine	Pyridine	mg/kg	0.12 U	0.12 U	0.12 U	0.11 U
SW8270C Safrole	Safrole	mg/kg	0 22 U	0.21 U	0.22 U	0.19 U

Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

•			BHGLAOC1910 00 ft	BHGLAOC1910 05 ft	BHGLAOC1910 10 ft	BHGLAOC1911 05 ft
Method	Analyte	Unit	2001-08-22	2001-08-22	2001-08-22	2001-12-05
SW6010B	Arsenic	mg/kg	NA	NA	NA	NA
SW6010B		mg/kg	NA	AN	NA	NA
SW6010B	$\overline{}$	mg/kg	NA	NA	NA	NA
SW6010B	Садтічт	mg/kg	NA	NA	NA	NA
SW6010B	Chromium, total	mg/kg	NA	NA	NA	NA
SW6010B Cobalt	Cobalt	mg/kg	NA	NA	NA	NA
SW6010B Copper	Copper	mg/kg	NA	NA	NA	NA
SW6010B	Nickel	mg/kg	NA	NA	NA	NA
SW6010B	Тіп	mg/kg	NA	NA	NA	NA
SW6010B		mg/kg	NA	NA	NA	NA
SW6010B	Zinc	mg/kg	NA	NA	NA	NA
SW7041	Antimony	mg/kg	NA	NA	NA	NA
SW7421	Lead	mg/kg	NA	NA	NA	NA
SW7471A	Mercury	mg/kg	NA	NA	NA	NA
SW7740	Selenium	mg/kg	NA	NA	NA	NA
SW7761	Silver	mg/kg	NA	NA	NA	NA
SW7841	$\neg$	mg/kg	NA	NA	NA	NA
SW8260B	$\dashv$	mg/kg	NA	NA	NA	NA
SW8260B	$\neg$	mg/kg	NA	NA	NA	NA
SW8260B	T	mg/kg	NA	NA	NA	NA
SW8260B		mg/kg	NA	NA	NA	NA
SW8260B		mg/kg	NA	NA	NA	NA
SW8260B		mg/kg	NA	NA	NA	NA
SW8260B	╗	mg/kg	NA	NA	NA	NA
SW8260B	╛	mg/kg	NA	NA	NA	NA
SW8260B	_	mg/kg	NA	NA	NA	AN
SW8260B		mg/kg	NA	NA	NA	NA
SW8260B	$\neg$	mg/kg	NA	NA	NA	NA
SW8260B	コ	mg/kg	NA	NA	NA	NA
SW8260B	2-Hexanone	mg/kg	NA	NA	NA	NA
SW8260B	ヿ	mg/kg	NA	NA	NA	NA
SW8260B	Acetonitrile	mg/kg	NA	NA	NA	NA
SW8260B	ヿ	mg/kg	NA	NA	NA	. VA
SW8260B	Acrylonitrile	mg/kg	NA	NA	NA	NA

Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

,			BHGLAOC1910 00 ft	BHGLAOC1910 05 ft	BHGLAOC1910 10 ft	BHGLAOC1911 05 ft
Method	Analyte	Unit	2001-08-22	2001-08-22	2001-08-22	2001-12-05
SW8260B	Allyl chloride (3-Chloropropene)	mg/kg	NA	NA	NA	NA
SW8260B	Т	mg/kg	NA	NA	NA	NA
SW8260B	T	mg/kg	NA	NA	VN	NA
SW8260B		mg/kg	NA	NA	NA	NA
SW8260B	_1	mg/kg	NA	NA	AN	NA
SW8260B	- 1	mg/kg	NA	NA	VΝ	NA
SW8260B		mg/kg	NA	NA	NA	NA
SW8260B		mg/kg	NA	NA	ΥN	NA
		mg/kg	NA	NA	AN	NA
- 1		mg/kg	NA	NA	NA	NA
	$\neg$	mg/kg	NA	NA	VΝ	NA
SW8260B		mg/kg	NA	NA	NA	NA
SW8260B	$\neg$	mg/kg	NA	AN	NA	NA
SW8260B		mg/kg	NA	NA	NA	NA
SW8260B	$\neg$	mg/kg	NA	NA	NA	NA
SW8260B	$\neg$	mg/kg	NA	NA	NA	NA
SW8260B	$\neg$	mg/kg	NA	NA	VΝ	NA
SW8260B		mg/kg	NA	NA	VN	NA
		mg/kg	NA	NA	NA	NA
SW8260B	Isobutanol	mg/kg	NA	NA	VN	NA
		mg/kg	NA	NA	AN	NA
		mg/kg	NA	NA	VN	NA
		mg/kg	NA	NA	W	NA
		mg/kg	NA	NA	VN	NA
SW8260B		mg/kg	NA	NA	AN	NA
		mg/kg	NA	NA	VΝ	NA
		mg/kg	NA	NA	VN	NA
	Т	mg/kg	NA	NA	NA	NA
		mg/kg	NA	NA	NA	NA
	Styrene	mg/kg	NA	NA	ΥN	NA
SW8260B		mg/kg	NA	NA	NA	NA
SW8260B	$\neg$	mg/kg	NA	NA	NA	NA
SW8260B	Toluene	mg/kg	NA	NA	NA	NA
SW8260B	Trans-1,2-Dichloroethene	mg/kg	NA	NA	NA	NA

Table E.1 Comprehensive Soil Results AOC 19 NAS Fort Worth JRB, Texas

**	A CONTRACTOR OF THE PROPERTY O	*	BHGLAOC1910 00 ft	BHGLAOC1910 05 ft	BHGLAOC1910 10 ft	BHGLAOC1911 05 ft
Method	Analyte	Unit	2001-08-22	2001-08-22	2001-08-22	2001-12-05
SW8260B	Trans-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA
SW8260B	Trans-1,4-Dichloro-2-Butene	mg/kg	NA	NA	NA	NA
SW8260B	Trichloroethere (TCE)	mg/kg	NA	AN	NA	NA
SW8260B	Trichlorofluoromethane	mg/kg	NA	NA	NA	NA
SW8260B	Vinyl acetate	mg/kg	NA	NA	NA	NA
SW8260B	Vinyl chloride	mg/kg	NA	VA	AN	NA
SW8270C		mg/kg	0.21 U	0.2 U	0.22 U	0 22 U
SW8270C	1,2,4-Trichlorobenzene	mg/kg	0.055 U	0.053 U	0 058 U	0.057 U
SW8270C	SW8270C 1,2-Dichlorobenzene	mg/kg	0.096 R	0.093 R	0.1 R	0.1 U
SW8270C	1,3,5-Trinitrobenzene	mg/kg	0 82 U	0.8 U	0.87 U	N 98 0
SW8270C	1,3-Dichlorobenzene	mg/kg	0.1 U	0.1 U	0 11 U	0.11 U
		mg/kg	0.37 U	0.36 U	0.4 U	0.39 U
SW8270C	$\rightarrow$	mg/kg	0.083 U	0.08 U	U 880 O	0.087 U
SW8270C	$\overline{}$	mg/kg	0.9 U	0.87 U	0 95 U	0.94 U
SW8270C	1,4-Naphthoquinone	mg/kg	1 4 U	13U	1.4 U	1.4 U
SW8270C	1-Naphthylamine	mg/kg	0.57 U	0.55 U	0 61 U	0.6 U
SW8270C	2,2'-Oxybts(1-chloropropane)	mg/kg	0.19 U	0.19 U	0.2 U	0.2 U
SW8270C	2,3,4,6-Tetrachlorophenol	mg/kg	0 31 U	0.3 U	0 33 U	0.33 U
SW8270C	2,4,5-Trichlorophenol	mg/kg	0.075 U	0.072 U	U 620'0	0.078 U
SW8270C	2,4,6-Trichlorophenol	mg/kg	0 076 U	0.073 U	0.081 U	0.08 U
SW8270C	2,4-Dichlorophenol	mg/kg	0.064 U	0.062 U	0 890 O	0.067 U
SW8270C	2,4-Dimethylphenol	mg/kg	0.25 UJ	0,24 U	0.26 U	0.26 U
SW8270C	2,4-Dinitrophenol	mg/kg	0.22 U	0 21 U	0.23 U	0.23 U
SW8270C	2,4-Dinitrotoluene	mg/kg	0 083 U	0.08 U	0.088 U	U 087 U
SW8270C	2,6-Dichlorophenol	mg/kg	0.24 U	0.24 U	0.26 U	0.25 U
SW8270C	2,6-Dinitrotoluene	mg/kg	0 087 U	0.084 U	0.092 U	0.091 U
SW8270C	2-Acetylaminofluorene	mg/kg	0 6 U	0.58 U	0.64 U	0.63 U
SW8270C	2-Aminonaphthalene (beta-Naphthylamine)	mg/kg	0 58 U	0.56 U	0.61 U	0.6 U
SW8270C	2-Chloronaphthalene	mg/kg	0.06 U	0.058 U	0 064 U	0.063 U
SW8270C	2-Chlorophenol	mg/kg	0 077 U	0.075 U	0 082 U	0.081 U
SW8270C	2-Methylnaphthalene	mg/kg	0 27 U	0.26 U	0.28 U	0.28 U
SW8270C	2-Methylphenol (o-Cresol)	mg/kg	0 14 U	0.13 U	0.15 U	0.14 U
SW8270C	2-Nitroaniline	mg/kg	0.12 U	0.12 U	0.13 U	0 13 U
SW8270C	2-Nitrophenol	mg/kg	0.086 U	0.083 U	0,091 U	0 00 U

Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

			BHGLAOC1910 00 ft	BHGLAOC1910 05 ft	BHGLA0C1910 10 ft	BHGLAOC1911 05 ft
Method	Analyte	Unit	2001-08-22	2001-08-22	2001-08-22	2001-12-05
SW8270C	2-Picoline (alpha-Picoline)	mg/kg	0.25 U	0.24 U	0 27 U	0.26 U
SW8270C	[3,3'-Dichlorobenzidine	mg/kg	0.13 UJ	0.12 U	0 14 U	0.13 U
SW8270C	3,3'-Dimethylbenzidine	mg/kg	0.34 U	0 33 U	0.36 U	0.35 U
SW8270C	3-Methylcholanthrene	mg/kg	0.34 U	0 33 U	0 36 U	0.35 U
SW8270C	3-Nitroaniline	mg/kg	0.16 U	0.15 U	0.16 U	0.16 U
SW8270C	4,6-Dinitro-2-methylphenol	mg/kg	0.16 U	0.15 U	0.17 U	0.16 U
SW8270C	4-Ammobiphenyl (4-Biphenylamine)	mg/kg	0.32 U	0.31 U	0.34 U	0.33 U
SW8270C	4-Bromophenyl phenyl ether	mg/kg	0 1 U	Ω 660 0	0 11 U	0.11 U
	4-Chloro-3-methylphenol	mg/kg	0 095 U	0.092 U	0.1 U	Ω 660 0
SW8270C	4-Chloroanılıne	mg/kg	0.14 UJ	0.14 U	0 15 U	0.15 U
SW8270C	SW8270C   4-Chlorophenyl phenyl ether	mg/kg	0.097 U	0.094 U	0.1 U	0.10
SW8270C		mg/kg	NA	NA	NA	0.14 U
SW8270C	4-Nitroaniline	mg/kg	0.15 U	0.15 U	0.16 U	0 16 U
SW8270C	4-Nitrophenol	mg/kg	0.41 UJ	0 4 U	0.43 U	0 43 U
SW8270C	4-Nitroquinoline-1-oxide	mg/kg	1.5 R	1 5 R	1.6 R	1.6 U
SW8270C	5-Nitro-o-toluidine	mg/kg	0 34 U	0.33 U	0.37 U	0 36 U
SW8270C	7,12-Dimethylbenzo(a)anthracene	mg/kg	0.52 U	0 5 U	0 55 U	0 54 U
SW8270C	Acenaphthene	mg/kg	0.059 U	0.057 U	0.063 U	0.13 F
SW8270C	Acenaphthylene	mg/kg	0.061 U	0.059 U	0.065 U	0.064 U
SW8270C	Acetophenone	mg/kg	0.31 U	03U	0 33 U	0.33 U
SW8270C	alpha, alpha-Dimethylphenethylamine	mg/kg	1 6 U	16U	1.7 U	1.7 U
SW8270C	Anılıne (Phenylamıne, Amınobenzene)	mg/kg	0.12 U	0.11 U	O 13 U	0.12 U
SW8270C	Anthracene	mg/kg	0.081 U	U 6/00	0.086 U	0 23 F
SW8270C	Aramite (total)	mg/kg	0.39 U	0 38 U	0.42 U	0.41 U
SW8270C	SW8270C Benzo(a)anthracene	mg/kg	0.059 U	0.057 U	0.063 U	0.65
SW8270C	Benzo(a)pyrene	mg/kg	0.065 U	0.077 F	Ω 690'0	0.58 J
SW8270C	Benzo(b)fluoranthene	mg/kg	0 12 U	0 12 U	0.13 U	19.0
· t	Benzo(g,h,i)perylene	mg/kg	0 17 U	0 16 U	0.18 U	0.3 F
SW8270C	Benzo(k)fluoranthene	mg/kg	0 13 R	0 12 R	0.14 R	0.47
SW8270C	Benzoic acıd	mg/kg	0 19 R	0.18 R	02R	0.2 U
SW8270C	Benzyl alcohol	mg/kg	0.11 Ü	0.11 U	0.12 U	0 12 U
SW8270C	Benzyl butyl phthalate	mg/kg	0 13 U	0.12 U	0.14 U	0 13 U
SW8270C	bis(2-Chloroethoxy)methane	mg/kg	0 066 U	0 064 U	0.07 U	0.069 U



Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

,		Ŀ	BHGLAOC1910 00 ft	BHGLAOC1910 05 ft	BHGLAOC1910 10 ft	BHG1.AOC1911 05 8
Method	Analyte	Unit	2001-08-22	2001-08-22	2001-08-22	2001-12-05
SW8270C		mg/kg	01U	0.098 U	0 11 U	0 11 U
SW8270C		mg/kg	0.13 U	0 12 U	0.13 U	0.13 U
SW8270C	Chlorobenzilate	mg/kg	0.26 U	0.25 U	0.27 U	0.27 U
SW8270C		mg/kg	0.045 U	0 043 U	0.047 U	0.74
SW8270C		mg/kg	0.13 U	0.13 U	0 14 U	NA
SW8270C	_	mg/kg	0 33 U	0.32 U	0.35 U	0.34 U
SW8270C		mg/kg	0.12 U	0.12 U	0.13 U	0.13 U
SW8270C		mg/kg	0 061 U	0.059 U	0.065 U	0.064 U
SW8270C	Diethyl phthalate	mg/kg	0.11 U	0.1 U	0.11 U	0110
SW8270C		mg/kg	0.084 U	0 081 U	0.089 U	0.088 U
SW8270C		mg/kg	0 08 U	0.078 U	0 085 U	0.084 U
SW8270C		mg/kg	0.3 U	0.29 U	0 32 U	0.31 U
SW8270C	Dinoseb	mg/kg	0.51 U	0.49 U	0 54 U	0 53 U
SW8270C	SW8270C Diphenylamine	mg/kg	0.23 U	0 22 U	0.24 U	0.24 U
SW8270C	SW8270C Ethyl methanesulfonate	mg/kg	0.37 U	0 35 U	0 39 U	0.38 U
SW8270C	SW8270C Fluoranthene	mg/kg	010	010	0 11 U	2.1 J
SW8270C Fluorene	Fluorene	mg/kg	0.11 U	0.11 U	0.12 U	0.27 F
SW8270C	SW8270C Hexachlorobenzene	mg/kg	0.079 U	U 277 U	0 084 U	U 680 U
SW8270C	SW8270C Hexachlorobutadiene	mg/kg	0.077 U	0.075 U	0.082 U	0 081 U
SW8270C	SW8270C Hexachlorocyclopentadiene	mg/kg	0 14 U	0.13 U	0.14 U	0.14 U
SW8270C	SW8270C Hexachloroethane	mg/kg	0.087 U	0.084 U	0.092 U	0.091 U
SW8270C		mg/kg	15 U	1.4 U	15U	1.5 U
SW8270C	Hexachloropropene	mg/kg	0.33 U	0.32 U	0.36 U	0.35 U
		mg/kg	0.12 U	0 12 U	0.13 U	0.31 F
SW82/0C	Isophorone	mg/kg	0.056 U	0.054 U	0.059 U	0.058 U
SW8270C Isosafrole	Isosatrole	mg/kg	0 24 U	0 23 U	0.25 U	0.25 U
SW8270C	SW8270C Methapyrilene	mg/kg	1.7 U	1.6 U	18U	1.7 U
SW82/0C	SW82/UC Methyl methanesultonate	mg/kg	0.37 U	0.36 U	0.39 U	0.39 U
SW8270C	SW8Z/0C Naphthatene	mg/kg	0 071 U	N 690 0	0.076 U	0.082 F
SW82/0C	SW82/0C Nitrobenzene	mg/kg	0.07 U	0.068 U	0.075 U	0.074 U
SW8270C	N-Nitrosodiethylamine	mg/kg	0.38 U	0.36 U	040	0.39 U
_	SW8270C N-Nitrosodimethylamine	mg/kg	0.12 U	0.12 U	0.13 U	0.13 U
	N-Nitrosodi-n-butylamine	mg/kg	0.2 U	U 61 0	0.21 U	0.21 U
SW82/0C	N-Nitrosodi-n-propylamine	mg/kg	0.11 Ü	0 11 U	0.12 U	0.12 U

Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

,		1	BHGLAOC1910 00 ft	BHGLAOC1910 05 ft	BHGLAOC1910 10 ft	BHGLAOC1911 05 ft
Method	Analyte	Unit	2001-08-22	2001-08-22	2001-08-22	2001:12-05
SW8270C	SW8270C N-Nitrosodiphenylamine	mg/kg	0.12 U	0 12 U	0.13 U	0.13 U
SW8270C	SW8270C N-Nitrosomethylethylamine	mg/kg	0 58 U	0.56 U	0 62 U	0.61 U
SW8270C	SW8270C N-Nitrosomorpholine	mg/kg	0 44 U	0 42 U	0.46 U	0.46 U
SW8270C	SW8270C N-Nitrosopiperidine	mg/kg	0 29 U	0.28 U	0.31 U	0.31 U
SW8270C	SW8270C N-Nitrosopyrrolidine	mg/kg	0 55 U	0 54 U	U 65.0	0.58 U
SW8270C	SW8270C o-Toluidine	mg/kg	0 26 U	0.26 U	0.28 U	0.28 U
SW8270C	SW8270C p-Dimethylaminoazobenzene	mg/kg	0.42 U	0.4 U	0 44 U	0.44 U
SW8270C	SW8270C Pentachlorobenzene	mg/kg	0.19 U	0 18 U	0.2 U	0.2 U
SW8270C	SW8270C Pentachloronitrobenzene	mg/kg	0.24 U	0.23 U	0.26 U	0.25 U
SW8270C	SW8270C Pentachlorophenol	mg/kg	0.21 UJ	0 2 U	0.22 U	0.22 U
SW8270C	SW8270C Phenacetin	mg/kg	0.43 U	0 42 U	0 46 U	0.45 U
SW8270C	SW8270C Phenanthrene	mg/kg	0.077 U	U 2/0.0	0 083 U	16J
SW8270C Phenol	Phenol	mg/kg	0.093 U	U 60.0	U 860.0	0 097 U
SW8270C	SW8270C p-Phenylenediamine	mg/kg	0.9 U	U 78.0	U 26.0	0.94 U
SW8270C	SW8270C Pronamide	mg/kg	0.46 U	0.44 U	0.48 U	0.48 U
SW8270C Pyrene	Pyrene	mg/kg	0.16 U	0.15 U	U 11 U	1.3
SW8270C Pyridine	Pyridine	mg/kg	0.11 U	0 11 U	0 12 U	0 12 U
SW8270C Safrole	Safrole	mg/kg	0.21 U	02 U	0.22 U	0.22 U

Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

2001-12-05 Dup  NA  NA  NA  NA  NA  NA  NA  NA  NA  N		NA N	2001-12-05  NA  NA  NA  NA  NA  NA  NA  NA  NA  N	NA
Arsenuc         mg/kg           Barum         mg/kg           Berylluum         mg/kg           Cadmium         mg/kg           Chromium, total         mg/kg           Cobalt         mg/kg           Copper         mg/kg           Nickel         mg/kg           Nickel         mg/kg           Antimony         mg/kg           Antimony         mg/kg           Selenum         mg/kg           Selenum         mg/kg           Silver         mg/kg           1.1.1.2-Tetrachloroethane         mg/kg           1.1.2-Trichloroethane         mg/kg           1.1.1-Dichloroethane         mg/kg           1.1.2-Trichloroethane         mg/kg           1.1.2-Dichloroethane         mg/kg           1.2-Dichloroethane         mg/kg		NA NA NA NA NA NA NA NA NA NA NA NA NA N	NA N	NA N
Barum         mg/kg           Beryllum         mg/kg           Cadmium         mg/kg           Cobalt         mg/kg           Copper         mg/kg           Nickel         mg/kg           Nickel         mg/kg           Tin         mg/kg           Variadium         mg/kg           Lead         mg/kg           Antimony         mg/kg           Mercury         mg/kg           Selenum         mg/kg           Silver         mg/kg           Thallium         mg/kg           1.1.2-Tetrachlorocthane         mg/kg           1.1.2-Trichlorocthane         mg/kg           1.1.1-Drihlorocthane         mg/kg           1.1.1-Drihlorocthane         mg/kg           1.2.3-Trichloroptopane         mg/kg           1.2.1-Drihlorocthane         mg/kg           1.2-Dichlorocthane         mg/kg		NA N	NA N	NA N
Berylluum         mg/kg           Cadmium         mg/kg           Cobalt         mg/kg           Copper         mg/kg           Nickel         mg/kg           Nickel         mg/kg           Tin         mg/kg           Varadum         mg/kg           Zinc         mg/kg           Antimony         mg/kg           Lead         mg/kg           Selenum         mg/kg           Selenum         mg/kg           Silver         mg/kg           Thallium         mg/kg           1.1.1.2-Tetrachlorocthane         mg/kg           1.1.2-Trichlorocthane         mg/kg           1.1.1-Drihlorocthane         mg/kg           1.1.1-Drihlorocthane         mg/kg           1.2.3-Trichloropropane         mg/kg           1.2.Dibromo-3-chloropropane         mg/kg           1.2-Dibromo-chane         mg/kg           1.2-Dibromo-chane         mg/kg           1.2-Dibromo-chane         mg/kg           1.2-Dibromo-chane         mg/kg           1.2-Dibromo-chane         mg/kg           1.2-Dibromo-chane         mg/kg           1.2-Dibromo-dhane         mg/kg		NA NA NA NA NA NA NA NA NA NA NA	N A N A N A A N A A N A A N A A N A A N A A N A A N A A N A A N A	NA N
Cadmium         mg/kg           Chromium, total         mg/kg           Cobalt         mg/kg           Copper         mg/kg           Nickel         mg/kg           Tin         mg/kg           Vanadum         mg/kg           Zinc         mg/kg           Antimony         mg/kg           Antimony         mg/kg           Mercury         mg/kg           Selenium         mg/kg           Selenium         mg/kg           Silver         mg/kg           Thallium         mg/kg           1,1,2-Tetrachloroethane         mg/kg           1,1,1-Trichloroethane         mg/kg           1,1-Dichloroethane         mg/kg           1,1-Dichloroethane         mg/kg           1,1-Dichloroethane         mg/kg           1,1-Dichloroethane         mg/kg           1,1-Dichloroethane         mg/kg           1,1-Dichloroethane         mg/kg           1,2-Dirbromo-3-chloropropane         mg/kg           1,2-Dirbromo-3-chloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg </td <td></td> <td>NA NA NA NA NA NA NA NA NA NA</td> <td>N A N A N A N A N A N A N A N A N A N A</td> <td>NA NA N</td>		NA NA NA NA NA NA NA NA NA NA	N A N A N A N A N A N A N A N A N A N A	NA N
Chromium, total         mg/kg           Cobalt         mg/kg           Copper         mg/kg           Nickel         mg/kg           Tin         mg/kg           Vanaduum         mg/kg           Zinc         mg/kg           Antimony         mg/kg           Antimony         mg/kg           Selenium         mg/kg           Silver         mg/kg           1,1,1,2-Terrachloroethane         mg/kg           1,1,1,2-Terrachloroethane         mg/kg           1,1,1,2-Terrachloroethane         mg/kg           1,1,1,2-Terrachloroethane         mg/kg           1,1,2-Trichloroethane         mg/kg           1,1,2-Trichloroethane         mg/kg           1,1,2-Trichloroethane         mg/kg           1,2-Dichloroethane         mg/kg		NA NA NA NA NA NA NA NA	NA N	NA NA NA NA NA NA NA NA NA
Cobalt         mg/kg           Copper         mg/kg           Nickel         mg/kg           Tin         mg/kg           Varadum         mg/kg           Zinc         mg/kg           Antimony         mg/kg           Lead         mg/kg           Mercury         mg/kg           Selenum         mg/kg           Silver         mg/kg           1,1,2-Tetrachloroethane         mg/kg           1,1,1,2-Tetrachloroethane         mg/kg           1,1,1,2-Trichloroethane         mg/kg           1,1,1,2-Trichloroethane         mg/kg           1,1,1-Dichloroethane         mg/kg           1,1-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dishromo-3-chloropropane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg		NA NA NA NA NA NA NA	NA N	NA NA NA NA NA NA NA NA
Copper         mg/kg           Nickel         mg/kg           Tin         mg/kg           Vanadum         mg/kg           Zinc         mg/kg           Antimony         mg/kg           Lead         mg/kg           Mercury         mg/kg           Selenum         mg/kg           Silver         mg/kg           1.1,1,2-Tetrachloroethane         mg/kg           1.1,1,2-Trichloroethane         mg/kg           1.1,1-Dichloroethane         mg/kg           1.1,1-Dichloroethane         mg/kg           1.1,1-Dichloroethane         mg/kg           1.1,2-Trichloroethane         mg/kg           1.1,2-Trichloroethane         mg/kg           1.2-Dichloroethane         mg/kg		NA NA NA NA NA NA NA	NA N	NA N
Nickel         mg/kg           Tin         mg/kg           Vanadium         mg/kg           Zinc         mg/kg           Antimony         mg/kg           Lead         mg/kg           Mercury         mg/kg           Selenium         mg/kg           Silver         mg/kg           Thallium         mg/kg           1,1,1,2-Tetrachloroethane         mg/kg           1,1,2,2-Tetrachloroethane         mg/kg           1,1,1,2-Trichloroethane         mg/kg           1,1,2-Trichloroethane         mg/kg           1,1,2-Trichloroethane         mg/kg           1,1,2-Trichloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dibromo-3-chloropane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloropropane         mg/kg		NA NA NA NA NA NA NA	NA NA AN A	NA N
Tin         mg/kg           Vanadum         mg/kg           Zinc         mg/kg           Antimony         mg/kg           Lead         mg/kg           Mercury         mg/kg           Selenum         mg/kg           Silver         mg/kg           Thallium         mg/kg           1,1,2-Tetrachloroethane         mg/kg           1,1,2-Trichloroethane         mg/kg           1,1,2-Trichloroethane         mg/kg           1,1-Dichloroethane         mg/kg           1,2-Trichloroethane         mg/kg           1,2-Trichloroptopane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroptopane         mg/kg		NA NA NA NA NA NA	NA NA NA NA NA NA	NA NA NA NA NA
Vanadum         mg/kg           Zinc         mg/kg           Antimony         mg/kg           Lead         mg/kg           Mercury         mg/kg           Selenum         mg/kg           Salver         mg/kg           Thallium         mg/kg           1,1,2-Terrachloroethane         mg/kg           1,1,2-Trichloroethane         mg/kg           1,1,2-Trichloroethane         mg/kg           1,1-Dichloroethane         mg/kg           1,1-Dichloroethane         mg/kg           1,2-3-Trichloropropane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg		NA NA NA NA NA	NA NA NA NA NA	NA NA NA NA
Zinc         mg/kg           Antimony         mg/kg           Lead         mg/kg           Mercury         mg/kg           Selenum         mg/kg           Salver         mg/kg           Thallium         mg/kg           1,1,2-Tetrachloroethane         mg/kg           1,1,2-Trichloroethane         mg/kg           1,1,2-Trichloroethane         mg/kg           1,1-Dichloroethane         mg/kg           1,1-Dichloroethane         mg/kg           1,2-Trichloroptopane         mg/kg           1,2-Dibromo-3-chloroptopane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg		NA NA NA NA NA	NA NA NA NA	NA NA NA NA
Antimony         mg/kg           Lead         mg/kg           Mercury         mg/kg           Selenum         mg/kg           Salver         mg/kg           Thallium         mg/kg           1,1,1,2-Tetrachloroethane         mg/kg           1,1,2-Trichloroethane         mg/kg           1,1,2-Trichloroethane         mg/kg           1,1,1-Dichloroethane         mg/kg           1,1-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dibromo-3-chloropane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg		NA NA NA NA NA	NA NA NA	NA NA NA
Lead         mg/kg           Mercury         mg/kg           Selenum         mg/kg           Salver         mg/kg           Thallium         mg/kg           1,1,2-Terrachloroethane         mg/kg           1,1,2-Trichloroethane         mg/kg           1,1,2-Trichloroethane         mg/kg           1,1,2-Trichloroethane         mg/kg           1,1-Duchloroethane         mg/kg           1,1-Duchloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dibromo-3-chloropane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg		NA NA NA NA	NA NA NA	NA NA
Mercury         mg/kg           Selenum         mg/kg           Silver         mg/kg           Thallium         mg/kg           1,1,1,2-Terrachloroethane         mg/kg           1,1,2-Trichloroethane         mg/kg           1,1,2-Trichloroethane         mg/kg           1,1,2-Dichloroethane         mg/kg           1,1-Dichloroethane         mg/kg           1,2-Trichloropropane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dibromo-3-chloropropane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloropropane         mg/kg           1,2-Dichloropropane         mg/kg		NA NA NA	NA NA	NA
Selenum         mg/kg           Silver         mg/kg           Thallium         mg/kg           1,1,1,2-Tetrachloroethane         mg/kg           1,1,2,2-Tetrachloroethane         mg/kg           1,1,2-Trichloroethane         mg/kg           1,1-Dichloroethane         mg/kg           1,1-Dichloroethane         mg/kg           1,2,3-Trichloropropane         mg/kg           1,2-Dibromo-3-chloropropane         mg/kg           1,2-Dibromo-ethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloropropane         mg/kg		NA NA NA	NA	I NIA
Silver         mg/kg           Thallium         mg/kg           1,1,2-Tetrachloroethane         mg/kg           1,1,2-Trichloroethane         mg/kg           1,1,2-Trichloroethane         mg/kg           1,1,Drhloroethane         mg/kg           1,1-Drhloroethane         mg/kg           1,2,3-Trichloropropane         mg/kg           1,2-Dibromo-3-chloropropane         mg/kg           1,2-Dibromo-ethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloroethane         mg/kg           1,2-Dichloropropane         mg/kg		NA NA		<b>Y</b> X
Thallium         mg/kg           1.1,1,2-Tetrachloroethane         mg/kg           1.1,1,2.2-Tetrachloroethane         mg/kg           1.1,2,2-Tetrachloroethane         mg/kg           1.1,1-Drichloroethane         mg/kg           1.1-Dichloroethane         mg/kg           1.1.2-Dichloropropane         mg/kg           1.2-Dibromoethane (Ethylene dibromide)         mg/kg           1.2-Dichloroethane         mg/kg           1.2-Dichloropropane         mg/kg           1.2-Dichloropropane         mg/kg		NA	AN	NA
1,1,1,2-Tetrachloroethane       mg/kg         1,1,1,2-Tetrachloroethane       mg/kg         1,1,2,2-Tetrachloroethane       mg/kg         1,1,2-Trichloroethane       mg/kg         1,1-Dichloroethane       mg/kg         1,1-Dichloroethane       mg/kg         1,2,3-Trichloropropane       mg/kg         1,2-Dichloroethane       Ethylene dibromide)       mg/kg         1,2-Dichloroethane       mg/kg         1,2-Dichloropropane       mg/kg			NA	NA
1,1,1-Trichloroethane       mg/kg         1,1,2,2-Tetrachloroethane       mg/kg         1,1,2-Trichloroethane       mg/kg         1,1-Dichloroethane       mg/kg         1,1-Dichloroethane       mg/kg         1,2-Dibromo-3-chloropropane       mg/kg         1,2-Dibromoethane (Ethylene dibromide)       mg/kg         1,2-Dichloroethane       mg/kg         1,2-Dichloropropane       mg/kg		NA	NA	NA
1,1,2,2-Tetrachloroethane       mg/kg         1,1,2-Trichloroethane       mg/kg         1,1-Dichloroethane       mg/kg         1,1-Dichloroethene       mg/kg         1,2,3-Trichloropropane       mg/kg         1,2-Dibromo-3-chloropropane       mg/kg         1,2-Dichloroethane       mg/kg         1,2-Dichloropropane       mg/kg         1,2-Dichloropropane       mg/kg		NA	NA	NA
1,1,2-Trichlorocthane       mg/kg         1,1-Dichlorocthane       mg/kg         1,1-Dichlorocthene       mg/kg         1,2,3-Trichloropropane       mg/kg         1,2-Dibromo-3-chloropropane       mg/kg         1,2-Dibromoethane (Ethylene dibromide)       mg/kg         1,2-Dichloropropane       mg/kg         1,2-Dichloropropane       mg/kg		NA	NA	NA
1,1-Dachlorocthanemg/kg1,1-Dechlorocthenemg/kg1,2,3-Trichloropropanemg/kg1,2-Dibromo-3-chloropropanemg/kg1,2-Dibromoethane (Ethylene dibromide)mg/kg1,2-Dichlorocethanemg/kg1,2-Dichloropropanemg/kg		NA	NA	NA
1,1-Dichlorocthenemg/kg1,2,3-Trichloropropanemg/kg1,2-Dibromo-3-chloropropanemg/kg1,2-Dibromoethane (Ethylene dibromide)mg/kg1,2-Dichlorocethanemg/kg1,2-Dichloropropanemg/kg		NA	NA	NA
1.2.3-Trichloropropanemg/kg1.2-Dibromo-3-chloropropanemg/kg1.2-Dibromoethane (Ethylene dibromide)mg/kg1.2-Dichloropropanemg/kg		NA	NA	NA
1,2-Dibromo-3-chloropropanemg/kg1,2-Dibromoethane (Ethylene dibromide)mg/kg1,2-Dichloroethanemg/kg1,2-Dichloropropanemg/kg		NA	NA	NA
1,2-DibromoethaneEthylene dibromide)mg/kg1,2-Dichloroethanemg/kg1,2-Dichloropropanemg/kg		NA	NA	NA
1,2-Dichloropropane mg/kg 1,2-Dichloropropane mg/kg		NA	NA	NA
1,2-Dichloropropane [mg/kg]		NA	NA	NA
	mg/kg NA	NA	NA	NA
SW8260B   2-Chloro-1,3-butadiene   mg/kg   NA		NA	NA	NA
		NA	NA	NA
Acetone mg/kg		NA	ΝΑ	NA
Acetomtrile mg/kg		NA	NA	NA .
Acrolein   mg/kg		NA	NA	NA
SW8260B Acrylonitrile NA mg/kg NA		NA	NA	NA

			BHGLA0C1911 05 ft	BHGLA0C1912 05 ft	BHGLA0C1912 10 ft	BHGLA0C1913 05 ft
Method	Analyte	Unit	2001-12-05 Dup	2001-12-05	2001-12-05	2001-12-05
SW8260B	Allyl chloride (3-Chloropropene)	mg/kg	NA	NA	NA	NA
SW8260B		mg/kg	NA	NA	NA	NA
SW8260B		mg/kg	NA	NA	NA	NA
SW8260B	Bromoform	mg/kg	NA	NA	NA	NA
SW8260B	╗	mg/kg	NA	NA	NA	Ϋ́Α
SW8260B		mg/kg	NA	NA	NA	NA
SW8260B	Carbon tetrachloride	mg/kg	NA	NA	NA	NA
SW8260B	╗	mg/kg	NA	NA	NA	NA
SW8260B	П	mg/kg	NA	NA	NA	NA
SW8260B	_	mg/kg	NA	NA	NA	NA
SW8260B		mg/kg	NA	NA	NA	NA
SW8260B		mg/kg	NA	NA	NA	NA
SW8260B	cıs-1,3-Dıchloropropene	mg/kg	NA	NA	NA	ΑX
SW8260B		mg/kg	NA	NA	NA	NA
SW8260B	Dibromomethane	mg/kg	NA	NA	NA	NA
SW8260B	_	mg/kg	NA	NA	NA	NA
SW8260B	_	mg/kg	NA	NA	NA	NA
SW8260B	Ethylbenzene	mg/kg	NA	NA	NA	NA
SW8260B	_	mg/kg	NA	NA	YN	NA
SW8260B		mg/kg	NA	NA	NA	NA
SW8260B		mg/kg	NA	NA	AN	NA
SW8260B		mg/kg	NA	NA	NA.	NA
SW8260B	- 1	mg/kg	NA	NA	W	NA
SW8260B		mg/kg	NA	NA	NA	NA
SW8260B	- 1	mg/kg	NA	NA	NA	NA
SW8260B		mg/kg	NA	NA	NA	NA
SW8260B	- 1	mg/kg	NA	NA	NA	NA
SW8260B		mg/kg	NA	NA	NA	NA
SW8260B	Propane nitrile (Propionitrile)	mg/kg	NA	NA	NA	NA
SW8260B	Styrene	mg/kg	NA	NA	NA	NA
SW8260B	Tert-Butyl Methyl Ether	mg/kg	NA	NA	NA	NA
SW8260B	Т	mg/kg	NA	NA	NA	NA
SW8260B	_	mg/kg	NA	NA	NA	NA
SW8260B	Trans-1,2-Dichloroethene	mg/kg	NA	NA	NA	NA

Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

, , , , , , , , , , , , , , , , , , ,		BHGLAOC1911 05 ft	BHGLAOC1912 05 ft	BHGLA0C1912 10 ft	BHGLAOC1913 05 ft
Method	Unit	2001-12-05 Dup	2001-12-05	2001-12-05	2001-12-05
SW8260B Trans-1,3-Dichloropropene	mg/kg	NA	ΨN	NA	NA
	mg/kg	NA	NA	NA	NA
	mg/kg	NA	NA	NA	0.051 J
$\neg$	mg/kg	NA	NA	NA	AN
	mg/kg	NA	NA	NA	ΝΑ
	mg/kg	NA	NA	NA	NA
	mg/kg	0.22 U	0.22 U	0 21 U	NA
-	mg/kg	0.058 U	0.058 U	0.056 U	NA
SW8270C 1,2-Dichlorobenzene	mg/kg	0 1 U	0.1 U	Ω 660 0	NA
	mg/kg	0.87 U	0.87 U	0.85 U	NA
SW8270C 1,3-Dichlorobenzene	mg/kg	0.11 U	0 11 U	0.11 U	NA
$\dashv$	mg/kg	0 4 U	0.4 U	0.39 U	NA
	mg/kg	0.087 U	0.088 U	0.085 U	NA
	mg/kg	0.95 U	0.96 U	0 92 U	NA
SW8270C [1,4-Naphthoquinone	mg/kg	1.4 U	1.4 U	140	NA
	mg/kg	0 9 O	0.61 U	0.59 U	NA
	mg/kg	0 2 U	0 2 U	0.2 U	NA
	mg/kg	0.33 U	0.33 U	0.32 U	NA
Т	mg/kg	0.079 U	0.079 U	U 1/20.0	NA
	mg/kg	0.08 U	0.081 U	0 078 U	NA
	mg/kg	O 067 U	0.068 U	0.065 U	AN
	mg/kg	0.26 U	0.26 U	0.26 U	NA
7	mg/kg	0.23 U	0.23 U	0.23 U	NA
	mg/kg	0.087 U	0.088 U	0.085 U	NA
$\neg$	mg/kg	0.26 U	0.26 U	0 25 U	NA
T	mg/kg	0.092 U	0.093 U	U 680.0	NA
	mg/kg	0 63 U	0.64 U	0.62 U	AN
_	mg/kg	0 61 U	0.61 U	0.59 U	NA
	mg/kg	0.064 U	0.064 U	0.062 U	NA
_	mg/kg	0.081 U	0.082 U	U 6/0.0	NA
$\neg$	mg/kg	0.28 U	0.28 U	0 27 U	NA
┑	mg/kg	0.15 U	0.15 U	0 14 U	NA
$\neg$	mg/kg	0.13 U	0.13 U	0.12 U	NA
SW8270C 2-Nitrophenol	mg/kg	0 091 U	0 091 U	0.088 U	NA .

Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

MethodAnalyteSW8270C2-Proline (alpha-Picoline)SW8270C3.3DichlorobenzudineSW8270C3.3DimethylbenzidineSW8270C3-MethylcholanthreneSW8270C3-MiroanilineSW8270C4,6-Dinitro-2-methylphenolSW8270C4-Aminobiphenyl (4-Biphenylamine)SW8270C4-Aminobiphenyl phenyl etherSW8270C4-Chloro-3-methylphenolSW8270C4-Chloro-3-methylphenolSW8270C4-ChloroanilineSW8270C4-Chloroaniline	Unit   mg/kg   mg/kg	2001-12-05 Dup 0 26 U 0 13 U 0.36 U 0.36 U 0.17 U 0.17 U 0.11 U 0.11 U 0.15 U 0.15 U	2001-12-05 0.27 U 0.14 U 0.36 U 0.16 U 0.17 U 0.17 U 0.11 U 0.11 U 0.15 U	2001-12-05 0.26 U 0.13 U 0.35 U 0.35 U 0.16 U 0.16 U 0.11 U 0.097 U 0.15 U 0.15 U	2001-12-05 NA NA NA NA
	mg/kg   mg/k	0.26 U 0.13 U 0.36 U 0.36 U 0.16 U 0.11 U 0.11 U 0.15 U 0.14 U	0.27 U 0.14 U 0.36 U 0.36 U 0.16 U 0.17 U 0.34 U 0.11 U 0.11 U 0.15 U	0.26 U 0.13 U 0.35 U 0.35 U 0.16 U 0.16 U 0.11 U 0.097 U 0.15 U	NA NA NA NA NA
	mg/kg   mg/k	0.13 U 0.36 U 0.36 U 0.16 U 0.17 U 0.11 U 0.10 0.15 U 0.14 U	0.14 U 0.36 U 0.16 U 0.17 U 0.34 U 0.11 U 0.15 U 0.15 U	0.13 U 0.35 U 0.35 U 0.16 U 0.16 U 0.11 U 0.097 U 0.15 U	NA NA NA NA
	mg/kg   mg/k	0.36 U 0.36 U 0.16 U 0.17 U 0.34 U 0.11 U 0.15 U 0.15 U	0.36 U 0.36 U 0.16 U 0.17 U 0.34 U 0.11 U 0.15 U 0.15 U	0.35 U 0.35 U 0.16 U 0.16 U 0.33 U 0.11 U 0.097 U 0.15 U	NA NA NA
	mg/kg   mg/k	0.36 U 0.16 U 0.17 U 0.34 U 0.11 U 0.15 U 0.15 U	0.36 U 0.16 U 0.17 U 0.34 U 0.11 U 0.15 U 0.15 U	0.35 U 0.16 U 0.16 U 0.33 U 0.11 U 0.097 U 0.15 U	NA NA
	mg/kg   mg/k	0.16 U 0.17 U 0.34 U 0.11 U 0.15 U 0.15 U 0.14 U	0.16 U 0.17 U 0.34 U 0.11 U 0.15 U 0.15 U	0.16 U 0.16 U 0.33 U 0.11 U 0.097 U 0.15 U	NA
	mg/kg   mg/k	0.17 U 0.34 U 0.11 U 0.1 U 0.15 U 0.14 U	0.17 U 0.34 U 0.11 U 0.15 U 0.15 U	0.16 U 0.33 U 0.11 U 0.097 U 0.15 U	NA
	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	0.34 U 0.11 U 0.1 U 0.15 U 0.14 U	0.34 U 0 11 U 0.1 U 0.15 U 0.15 U	0 33 U 0 11 U 0.097 U 0.15 U	
	mg/kg   mg/k	0.11 U 0.1 U 0.15 U 0.14 U	0 11 U 0.1 U 0.15 U 0.15 U	0.11 U 0.097 U 0.15 U 0.10	NA
	mg/kg mg/kg mg/kg mg/kg	0.1 U 0.15 U 0 1 U 0.14 U	0.1 U 0.15 U 0.1 U	0.097 U 0.15 U 0.1 U	NA
	mg/kg mg/kg mg/kg	0.15 U 0.1 U 0.14 U	0.15 U 0.1 U	0.15 U 0.1 U	NA
	mg/kg mg/kg mg/kg	0 1 U 0.14 U	0.1 U	0.1 U	NA
	mg/kg mg/kg	0.14 U			NA
	mg/kg		0.14 U	0.14 U	NA
		0.16 U	0.16 U	0.15 U	NA
	IIIB/KB	0.43 U	0.43 U	0.42 U	NA
SW8270C 4-Nitroquinoline-1-oxide	mg/kg	160	1.6 U	1.6 U	NA
╗	mg/kg	0.36 U	0.37 U	0.35 U	NA
	mg/kg	0.55 U	0.55 U	0 53 U	NA
SW8270C Acenaphthene	mg/kg	0 062 U	O 063 U	0 061 U	NA
SW8270C Acenaphthylene	mg/kg	0.065 U	0.065 U	0.063 U	NA
П	mg/kg	0.33 U	0.33 U	0 32 U	NA
SW8270C alpha, alpha-Dimethylphenethylamine	mg/kg	1.7 Ū	1.7 U	1.7 U	NA
$\neg$	mg/kg	0.12 U	0.13 U	0.12 U	NA
SW8270C Anthracene	mg/kg	0.086 U	0.087 U	0 084 U	NA
	mg/kg	0.41 U	0.42 U	0.4 U	NA
	mg/kg	0,64	0.063 U	O 190 O	NA
7	mg/kg	0 82 J	O 690 O	U 790.0	NA
	mg/kg	0 91	0 13 U	0.12 U	NA
SW8270C Benzo(g, h, i)perylene	mg/kg	0 52 J	0 18 U	0.17 U	NA
SW8270C Benzo(k)fluoranthene	mg/kg	0 62	0 14 U	0.13 U	NA
	mg/kg	0.2 U	0.2 U	0.2 U	NA
	mg/kg	0 12 U	0 12 U	0.12 U	NA
	mg/kg	0.14 U	0 14 U	0.13 U	NA
SW8270C   bis(2-Chloroethoxy)methane	mg/kg	0.069 U	O 00 O	O 890'0	NA

Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

~			BHGLAOC1911 05 ft	BHGLA0C1912 05 ft	BHGLAOC1912 10 ft	BHGI,AOC1913 05 ft
Method	Analyte	Unit	2001-12-05 Dup	2001-12-05	2001-12-05	2001-12-05
SW8270C	bis(2-Chloroethyl)ether (2-Chloroethyl ether)	mg/kg	0.11 U	0 11 U	0.1 U	NA
SW8270C	SW8270C bis(2-Ethylhexyl)phthalate	mg/kg	0.16 F	0.13 U	0.13 U	NA
SW8270C	Chlorobenzilate	mg/kg	0.27 U	0.27 Ü	0.26 U	NA
SW8270C Chrysene	Chrysene	mg/kg	0.72	0 047 U	0 046 U	NA
SW8270C		mg/kg	NA	NA	NA	NA
SW8270C		mg/kg	0 34 U	0.35 U	0.33 U	NA
SW8270C		mg/kg	0.17 F	0.13 U	0 13 U	NA
SW8270C		mg/kg	0.065 U	0 065 U	0.063 U	NA
SW8270C	Diethyl phthalate	mg/kg	0.11 U	0.11 U	0 11 U	NA
SW8270C	SW8270C Dimethyl phthalate	mg/kg	0.088 U	0.089 U	0.086 U	NA
SW8270C	SW8270C Di-n-butyl phthalate	mg/kg	0 085 U	0.085 U	0.083 U	NAČ
SW8270C	SW8270C Di-n-octyl phthalate	mg/kg	0.31 U	0.32 U	0.31 U	NA
SW8270C Dinoseb	Dinoseb	mg/kg	0 53 U	0 54 U	0 52 U	NA
SW8270C	SW8270C Diphenylamine	mg/kg	0 24 U	0 24 U	0.23 U	NA
SW8270C	SW8270C Ethyl methanesulfonate	mg/kg	0 36 U	0 39 U	0.38 U	NA
SW8270C	SW8270C Fluoranthene	mg/kg	1.1	0 11 U	0.11 U	NA
SW8270C Fluorene	Fluorene	mg/kg	0.17 F	0.12 U	0.11 U	NA
SW8270C	SW8270C Hexachlorobenzene	mg/kg	0 084 U	0 084 U	0 081 U	NA
SW8270C	SW8270C Hexachlorobutadiene	mg/kg	0 081 U	0 082 U	O 620 O	NA
SW8270C	SW8270C [Hexachlorocyclopentadiene	mg/kg	0.14 U	0.14 U	0.14 U	NA
SW8270C	SW8270C Hexachloroethane	mg/kg	0.092 U	0.093 U	0.089 U	AN
SW8270C	SW8270C Hexachlorophene	mg/kg	1.5 U	1.5 U	1.5 U	NA
SW8270C	SW8270C Hexachloropropene	mg/kg	0 35 U	0 36 U	0.34 U	NA
SW8270C	SW8270C Indeno(1,2,3-c,d)pyrene	mg/kg	0.5 J	0 13 U	0 13 U	NA
SW8270C	SW8270C Isophorone	mg/kg	0.059 U	0.059 U	0.057 U	NA
SW8270C Isosafrole	Isosafrole	mg/kg	0.25 U	0.26 U	0.25 U	NA
SW8270C		mg/kg	1.7 U	1.8 U	1.7 U	NA
	Methyl methanesulfonate	mg/kg	0.39 U	0.4 U	0 38 U	NA
		mg/kg	0.075 U	0.076 U	0.073 U	NA
SW8270C		mg/kg	0.074 U	0.075 U	0.072 U	NA
	N-Nitrosodiethylamine	mg/kg	0.4 U	0.4 U	0 39 U	NA
		mg/kg	0.13 U	0 13 U	0 13 U	NA
SW8270C		mg/kg	0.21 U	0 21 U	0.2 U	NA
SW82/0C	N-Nitrosodi-n-propylamine	mg/kg	0.12 U	0 12 U	0 12 U	NA

Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

·			BHGLAOC1911 05 ft	BHGLAOC1912 05 ft	BHGLAOC1912 10 ft	BHGLAOC1913 05 ft
Method	Analyte	Unit	2001-12-05 Dup	2001-12-05	2001-12-05	2001-12-05
SW8270C	SW8270C N-Nitrosodiphenylamine	mg/kg	0 13 U	0.13 U	0.12 U	NA
SW8270C	SW8270C N-Nitrosomethylethylamine	mg/kg	0 61 U	0.62 U	0.6 U	NA
SW8270C	SW8270C N-Nitrosomorpholine	mg/kg	0 46 U	0.47 U	0 45 U	AN
SW8270C	SW8270C N-Nitrosopiperidine	mg/kg	0.31 U	0.31 U	0.3 U	NA
SW8270C	SW8270C N-Nitrosopyrrolidine	mg/kg	0.58 U	0.59 U	0.57 U	NA
SW8270C	SW8270C o-Toluidine	mg/kg	0.28 U	0 28 U	0.27 U	NA
SW8270C	SW8270C p-Dimethylaminoazobenzene	mg/kg	0 44 U	0 44 U	0 43 U	NA
SW8270C	SW8270C   Pentachlorobenzene	mg/kg	0.2 U	0.2 U	0 19 U	NA
SW8270C	SW8270C Pentachloronitrobenzene	mg/kg	0.25 U	0.26 U	0.25 U	ΥN
SW8270C	SW8270C Pentachlorophenol	mg/kg	0 22 U	0.22 U	0.21 U	NA
SW8270C	SW8270C Phenacetin	mg/kg	0.46 U	0.46 U	0 45 U	NA
SW8270C	SW8270C Phenanthrene	mg/kg	0.55 J	0.082 U	0.079 U	Y Z
SW8270C Phenol	Phenol	mg/kg	0.098 U	0.098 U	0.095 U	NA
SW8270C	SW8270C p-Phenylenediamine	mg/kg	0.95 U	0.95 U	0.92 U	NA
SW8270C	SW8270C Pronamide	mg/kg	0.48 U	0 48 U	0.47 U	NA
SW8270C Pyrene	Pyrene	mg/kg	1.2	0.17 U	0 16 U	NA
SW8270C Pyridine	Pyridine	mg/kg	0.12 U	0 12 U	0.12 U	NA
SW8270C Safrole	Safrole	mg/kg	0.22 U	0.22 U	0.21 U	NA

Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

	A)		BHGLAOC1913 10 ft	THGLA0C1905 03 ft	WHGLTA050 00 ft	WHGLTA050 05 ft
Method	Analyte	Unit	2001-12-05	2001-08-15	2001-02-07	2001-02-07
SW6010B	Arsenic	mg/kg	NA	3.5 F	NA	NA
SW6010B	Ватит	mg/kg	NA	61.2	NA	NA
SW6010B	Beryllıum	mg/kg	NA	0.28	NA	NA
SW6010B	Садтит	mg/kg	NA	0.28 F	NA	NA
	Chromium, total	mg/kg	NA	72F	NA	NA
	Cobalt	mg/kg	NA	2.4 F	NA	NA
SW6010B	Copper	mg/kg	NA	33F	NA	NA
SW6010B	Nickel	mg/kg	NA	4.3 F	NA	NA
SW6010B	Tın	mg/kg	NA	1.1 F	NA	NA
SW6010B	Vanadium	mg/kg	NA	15 F	NA	NA
SW6010B	Zinc	mg/kg	NA	17 F	NA	NA
SW7041	Antimony	mg/kg	NA	0.18 U	NA	NA
SW7421	Lead	mg/kg	NA	7.9	NA	Ϋ́Α
SW7471A	Mercury	mg/kg	NA	0.0092 F	AN	NA
SW7740	Selenium	mg/kg	NA	0.76 UJ	NA	NA
19 <i>LL</i> MS	Silver	mg/kg	NA	0 064 UJ	AN	NA
SW7841	Thallium	mg/kg	NA	0.18 UJ	NA	ΝΑ
SW8260B	1,1,1,2-Tetrachloroethane	mg/kg	NA	0.0008 U	AN	NA
SW8260B	1, 1, 1-Trichloroethane	mg/kg	NA	U 20000	NA	NA
SW8260B	1,1,2,2-Tetrachloroethane	mg/kg	NA	U 20000	NA	NA
SW8260B	1,1,2-Trichloroethane	mg/kg	NA	0.0008 U	NA	NA
SW8260B	1, 1-Dichloroethane	mg/kg	NA	0.001 U	NA	NA
SW8260B	1, 1-Dichloroethene	mg/kg	NA	0.001 U	NA	NA
SW8260B	1,2,3-Trichloropropane	mg/kg	NA	0.001 U	NA	AN
SW8260B	1,2-Dıbromo-3-chloropropane	mg/kg	NA	0.001 R	NA	NA
SW8260B	1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	O 8000 O	NA	NA
SW8260B	1,2-Dichloroethane	mg/kg	NA	O 9000 O	NA	NA
SW8260B	1,2-Dichloropropane	mg/kg	NA	0.001 U	NA	NA
SW8260B	2-Chloro-1,3-butadiene	mg/kg	NA	0.0007 U	NA	NA
SW8260B	2-Hexanone	mg/kg	NA	0.002 U	NA	NA
SW8260B	Acetone	mg/kg	NA	0 004 R	NA	NA
SW8260B	Acetomtrile	mg/kg	NA	0.028 U	NA	NA
SW8260B	Acrolein	mg/kg	NA	0.042 U	NA	AN
SW8260B	Acrylonitrile	mg/kg	NA	Ω 800 0	NA	AN

Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

			BHGLAOC1913 10 ft	THGLA0C1905 03 ft	WHGLTA050 00 ft	WHGLTA050 05 ft
Method	Analyte	Unit	2001-12-05	2001-08-15	2001-02-07	2001-02-07
SW8260B	Allyl chloride (3-Chloropropene)	mg/kg	NA	0.002 U	WA	NA
SW8260B	Вепzепе	mg/kg	NA	0.0007 U	NA	NA
SW8260B	Bromodichloromethane	mg/kg	NA	U 7000.0	VN	NA
SW8260B	Bromoform	mg/kg	NA	0.001 U	NA	NA
SW8260B	Bromomethane	mg/kg	NA	0.003 R	NA	NA
SW8260B	Carbon disulfide	mg/kg	NA	0.002 U	NA	NA
SW8260B	Carbon tetrachloride	mg/kg	NA	Ω 6000'0	NA	NA
SW8260B	Chlorobenzene	mg/kg	NA	U 100.0	NA	NA
SW8260B		mg/kg	NA	0.002 U	ΥN	NA
SW8260B	Chloroform	mg/kg	NA	U 7000.0	NA	NA
SW8260B	SW8260B   Chloromethane	mg/kg	NA	U 100.0	NA	NA
SW8260B	SW8260B cis-1,2-Dichloroethene	mg/kg	NA	0.001 U	NA	NA
SW8260B	SW8260B cis-1,3-Dichloropropene	mg/kg	NA	U 6000.0	NA	NA
SW8260B	Dibromochloromethane	mg/kg	NA	0.0008 U	NA	NA
SW8260B	SW8260B Dibromomethane	mg/kg	NA	0.0008 U	NA.	NA
SW8260B	Dichlorodifluoromethane	mg/kg	NA	0.0008 U	NA	NA
SW8260B	SW8260B Ethyl methacrylate	mg/kg	NA	0.002 U	NA	NA.
SW8260B	Ethylbenzene	mg/kg	NA	0.001 U	NA	NA
SW8260B	SW8260B [Iodomethane (Methyl iodide)	mg/kg	NA	0 004 R	NA	NA
SW8260B	SW8260B [Isobutanol	mg/kg	NA	0 092 U	NA	NA
SW8260B	SW8260B m,p-Xylene (sum of isomers)	mg/kg	NA	0 000 U	NA	NA
SW8260B	Methyl ethyl ketone (2-Butanone)	mg/kg	NA	0.005 U	NA	NA
SW8260B	SW8260B Methyl isobutyl ketone (4-Methyl-2-pentanone)	mg/kg	NA	0.003 U	NA	NA
SW8260B	SW8260B Methyl methacrylate	mg/kg	NA	0.002 U	NA	NA
SW8260B	Methylacrylonitrile	mg/kg	NA	0.005 U	NA	NA
SW8260B	Methylene chloride	mg/kg	NA	0.002 U	NA	NA
SW8260B	o-Xylene (1,2-Dimethylbenzene)	mg/kg	NA	0.001 U	NA	NA
SW8260B	Pentachloroethane	mg/kg	NA	0.006 U	NA	NA
SW8260B	Propane nitrile (Propionitrile)	mg/kg	NA	0.021 U	NA	NA
SW8260B	Styrene	mg/kg	NA	0.001 U	NA	NA
SW8260B		mg/kg	NA	0.0007 U	NA	NA .
SW8260B	Tetrachloroethene (PCE)	mg/kg	NA	0.0007 U	NA	NA
SW8260B		mg/kg	NA	0.001 U	NA	NA
SW8260B	Trans-1,2-Dichloroethene	mg/kg	NA	0 001 U	NA	NA

Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

	The second secon		BHGLAOC1913 10 ft	THGLA0C1905 03 ft	WHGLTA050 00 ft	WHGLTA050 05 ft
Method	Analyte	Unit	2001-12-05	2001-08-15	2001-02-07	2001-02-07
SW8260B	Trans-1,3-Dichloropropene	mg/kg	NA	0.0009 U	NA	NA
SW8260B	Trans-1,4-Dichloro-2-Butene	mg/kg	NA	0 002 U	NA	NA
SW8260B	Trichloroethene (TCE)	mg/kg	0.036	0.0006 U	0 000 U	0.002 F
SW8260B	Trichlorofluoromethane	mg/kg	NA	0.0008 U	NA	W
SW8260B	Vınyl acetate	mg/kg	NA	O 9000 O	NA	AN
SW8260B		mg/kg	NA	0.0008 U	NA	NA
SW8270C		mg/kg	NA	0.19 U	NA	NA
SW8270C		mg/kg	NA	0.051 U	NA	NA
SW8270C		mg/kg	NA	U 60.0	NA	NA
SW8270C		mg/kg	NA	0.77 U	NA	NA
SW8270C	$\overline{}$	mg/kg	NA	0.097 U	NA	NA
SW8270C	1,3-Dinitrobenzene	mg/kg	NA	0.35 U	NA	VΑ
SW8270C	1,4-Dichlorobenzene	mg/kg	NA	U 770.0	NA	NA
SW8270C	1,4-Dioxane (p-Dioxane)	mg/kg	NA	0.84 U	NA	NA
SW8270C	1,4-Naphthoquinone	mg/kg	NA	1.3 U	NA	NA
		mg/kg	NA	0.53 U	NA	NA
SW8270C	2,2'-Oxybis(1-chloropropane)	mg/kg	NA	0.18 U	NA	NA
SW8270C	SW8270C 2,3,4,6-Tetrachlorophenol	mg/kg	NA	0.29 U	NA	NA
SW8270C	SW8270C   2,4,5-Trichlorophenol	mg/kg	NA	0 0 O	NA	NA
SW8270C	2,4,6-Trichlorophenol	mg/kg	NA	0.071 U	NA	NA
SW8270C	SW8270C 2,4-Dichlorophenol	mg/kg	NA	0.059 U	NA	NA
SW8270C	SW8270C 2,4-Dimethylphenol	mg/kg	NA	0.23 U	NA	VΝ
SW8270C	2,4-Dinitrophenol	mg/kg	NA	0.21 U	NA	ΥN
SW8270C	SW8270C 2,4-Dinitrotoluene	mg/kg	NA	0.077 U	NA	NA
	2,6-Dichlorophenol	mg/kg	NA	0.23 U	NA	NA
	2,6-Dinitrotoluene	mg/kg	NA	0.081 U	NA	W
_	2-Acetylaminofluorene	mg/kg	NA	0.56 U	NA	ΥN
	2-Aminonaphthalene (beta-Naphthylamine)	mg/kg	NA	0.54 U	NA	VN
	2-Chloronaphthalene	mg/kg	NA	0.056 U	NA	NA
SW8270C	2-Chlorophenol	mg/kg	NA	0.072 U	NA	ΨN
_	2-Methylnaphthalene	mg/kg	NA	0.25 U	NA	NA
	2-Methylphenol (o-Cresol)	mg/kg	NA	0.13 U	NA	NA
SW8270C	2-Nitroaniline	mg/kg	NA	0.11 U	NA	NA
SW8270C	2-Nitrophenol	mg/kg	NA	0.08 U	NA	NA

Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

NA N				BHGLA0C1913 10 ft	THGLA0C1905 03 ft.	WHGLTA050 00 ft	WHGLTA050 05 ft
December   mg/kg	Method	· Analyte	Unit	2001-12-05	2001-08-15	2001-02-07	2001-02-07
mg/kg         NA           mg/kg         NA           ng/kg         NA <td></td> <td>coline (alpha-Picoline)</td> <td>mg/kg</td> <td>NA</td> <td>0.23 U</td> <td>NA</td> <td>NA</td>		coline (alpha-Picoline)	mg/kg	NA	0.23 U	NA	NA
mg/kg   NA     mg/k	$\neg$	Dichlorobenzidine	mg/kg	NA	0.12 U	NA	NA
mg/kg	_	Dimethylbenzıdıne	mg/kg	NA	0 32 U	NA	NA
mg/kg	$\neg$	ethylcholanthrene	mg/kg	NA	0 32 U	NA	NA
ther mg/kg NA thracene mg/kg NA thracene mg/kg NA thracene mg/kg NA thracene mg/kg NA	$\neg$	troaniline	mg/kg	NA	0.14 U	NA	AN
ther mg/kg NA		Junitro-2-methylphenol	mg/kg	NA	0.15 U	NA	NA
ther         mg/kg         NA           ther         mg/kg         NA           ther         mg/kg         NA           ther         mg/kg         NA           mg/kg         NA         NA </td <td>╗</td> <td>nmobiphenyl (4-Biphenylamine)</td> <td>mg/kg</td> <td>NA</td> <td>Ω ε.ο</td> <td>NA</td> <td>NA</td>	╗	nmobiphenyl (4-Biphenylamine)	mg/kg	NA	Ω ε.ο	NA	NA
ther mg/kg NA  II) mg/kg NA  II) mg/kg NA  III) mg/kg NA  III) mg/kg NA  IIII) mg/kg NA  IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	$\neg$	omophenyl phenyl ether	mg/kg	NA	Ω 960'0	NA	NA
mg/kg NA	$\neg$	loro-3-methylphenol	mg/kg	NA	U 680.0	NA	NA
1)	$\neg$	loroandine	mg/kg	NA	0 13 U	NA	NA
mg/kg		dorophenyl phenyl ether	mg/kg	NA	U 160.0	NA	NA
mg/kg         NA           mg/kg         NA           intracene         mg/kg         NA           mg/kg         NA         NA           mg/kg         NA         NA           minobenzene)         mg/kg         NA           minobenzene)         mg/kg         NA           mg/kg         NA         NA	$\neg$	ethylphenol (P-Cresol)	mg/kg	NA	0.12 U	NA	NA
mg/kg         NA           mg/kg         NA           ithracene         mg/kg         NA           mg/kg         NA         NA           mg/kg         NA         NA           minobenzene)         mg/kg         NA           mg/kg         NA         NA		troaniline	mg/kg	NA	0 14 U	NA	NA
mg/kg         NA           inthracene         mg/kg         NA           mg/kg         NA         NA           mg/kg         NA         NA           minobenzene)         mg/kg         NA         NA           minobenzene)         mg/kg         NA         NA           mg/kg         NA         NA         NA	SW8270C 4-Nn	trophenol	mg/kg	NA	0.38 U	NA	NA
5-Nitro-o-toluidine         mg/kg         NA           7,12-Dimethylbenzo(a)anthracene         mg/kg         NA           Acenaphthene         ng/kg         NA           Acenaphthylene         ng/kg         NA           Acetophenone         mg/kg         NA           Acetophenone         mg/kg         NA           Acetophenone         mg/kg         NA           Anthracene         mg/kg         NA           Anthracene         mg/kg         NA           Anthracene         mg/kg         NA           Benzo(a)anthracene         mg/kg         NA           Benzo(a)pyrene         mg/kg         NA           Benzo(b)fluoranthene         mg/kg         NA           Benzo(b,1)pcrylene         mg/kg         NA           Benzo(b,1)pcrylene         mg/kg         NA           Benzo(c),1)pcrylene         mg/kg         NA           Benzo(k)fluoranthene         mg/kg         NA           Benzo(s),1,1)pcrylene         mg/kg         NA           Benzol acid         mg/kg         NA           Benzyl alcohol         mg/kg         NA	SW8270C 4-Nii	troquinoline-1-oxide	mg/kg	NA	1.4 U	ΝA	NA
7,12-Dimethylbenzo(a)anthracene         mg/kg         NA           Acenaphthene         mg/kg         NA           Acenaphthylene         mg/kg         NA           Acetophenone         mg/kg         NA           alpha, alpha-Dimethylphenethylamine         mg/kg         NA           Aniline (Phenylamine, Aminobenzene)         mg/kg         NA           Anthracene         mg/kg         NA           Benzo(a)pyrene         mg/kg         NA           Benzo(a)pyrene         mg/kg         NA           Benzo(b)fluoranthene         mg/kg         NA           Benzo(b)fluoranthene         mg/kg         NA           Benzo(k)fluoranthene         mg/kg         NA           Benzo(c)g,h,i)perylene         mg/kg         NA           Benzo(c)hinoranthene         mg/kg         NA           Benzo(c)hinoranthene         mg/kg         NA           Benzol alcohol         mg/kg         NA           Benzyl alcohol         mg/kg         NA	SW8270C   5-Nii	tro-o-toluidine	mg/kg	NA	0.32 U	NA	NA
Accraphthene         mg/kg         NA           Accraphthylene         mg/kg         NA           Acctophenone         mg/kg         NA           alpha, alpha-Dmethylphenethylamine         mg/kg         NA           Aniline (Phenylamine, Aminobenzene)         mg/kg         NA           Anthracene         mg/kg         NA           Benzo(a)pyrene         mg/kg         NA           Benzo(a)pyrene         mg/kg         NA           Benzo(b)fluoranthene         mg/kg         NA           Benzo(k)fluoranthene         mg/kg         NA           Benzo(k)fluoranthene         mg/kg         NA           Benzo(c)g,h,i)perylene         mg/kg         NA           Benzo(c)g,h,inbraythylene         mg/kg         NA           Benzol acid         mg/kg         NA           Benzyl alcohol         mg/kg         NA	$\overline{}$	-Dimethylbenzo(a)anthracene	mg/kg	NA	0 48 U	NA	NA
Acetophenone         mg/kg         NA           Acetophenone         mg/kg         NA           alpha, alpha-Dimethylphenethylamine         mg/kg         NA           Aniline (Phenylamine, Aminobenzene)         mg/kg         NA           Anthracene         mg/kg         NA           Benzo(a)pyrene         mg/kg         NA           Benzo(a)pyrene         mg/kg         NA           Benzo(b)fluoranthene         mg/kg         NA           Benzo(k)fluoranthene         mg/kg         NA           Benzo(k)fluoranthene         mg/kg         NA           Benzo(c)fluoranthene         mg/kg         NA           Benzol acid         mg/kg         NA           Benzyl alcohol         mg/kg         NA           Benzyl alcohol         mg/kg         NA	$\neg$	aphthene	mg/kg	NA	0.17 F	NA	NA
Acetophenone         mg/kg         NA           alpha, alpha-Dimethylamine         mg/kg         NA           Aniline (Phenylamine, Aminobenzene)         mg/kg         NA           Anthracene         mg/kg         NA           Aramite (total)         mg/kg         NA           Benzo(a)pyrene         mg/kg         NA           Benzo(a)pyrene         mg/kg         NA           Benzo(b,i)perylene         mg/kg         NA           Benzo(k)fluoranthene         mg/kg         NA           Benzo(k)fluoranthene         mg/kg         NA           Benzol acid         mg/kg         NA           Benzyl alcohol         mg/kg         NA           Benzyl alcohol         mg/kg         NA	$\neg$	aphthylene	mg/kg	NA	U 057 U	NA	NA
alpha, alpha, Dimethylphenethylamine         mg/kg         NA           Aniline (Phenylamine, Aminobenzene)         mg/kg         NA           Anthracene         mg/kg         NA           Aramite (total)         mg/kg         NA           Benzo(a)pyrene         mg/kg         NA           Benzo(b)fluoranthene         mg/kg         NA           Benzo(k)fluoranthene         mg/kg         NA           Benzo(k)fluoranthene         mg/kg         NA           Benzol acid         mg/kg         NA           Benzyl alcohol         mg/kg         NA           Benzyl alcohol         mg/kg         NA		ophenone	mg/kg	NA	0.29 U	NA	NA
Antline (Phenylamine, Aminobenzene)         mg/kg         NA           Anthracene         mg/kg         NA           Aramite (total)         mg/kg         NA           Benzo(a)anthracene         mg/kg         NA           Benzo(a)pyrene         mg/kg         NA           Benzo(b)fluoranthene         mg/kg         NA           Benzo(k)fluoranthene         mg/kg         NA           Benzo(k)fluoranthene         mg/kg         NA           Benzol acid         mg/kg         NA           Benzyl alcohol         mg/kg         NA           Benzyl alcohol         mg/kg         NA	$\neg$	1, alpha-Dimethylphenethylamine	mg/kg	NA	1.5 U	NA	NA
Anthracene         mg/kg         NA           Aramite (total)         mg/kg         NA           Benzo(a)anthracene         mg/kg         NA           Benzo(a)pyrene         mg/kg         NA           Benzo(b)fluoranthene         mg/kg         NA           Benzo(k)fluoranthene         mg/kg         NA           Benzo(k)fluoranthene         mg/kg         NA           Benzyl alcohol         mg/kg         NA           Benzyl alcohol         mg/kg         NA           Benzyl hittyl nhthalate         mg/kg         NA	一	ne (Phenylamine, Aminobenzene)	mg/kg	NA	0.11 U	NA	NA
Aramite (total)         mg/kg         NA           Benzo(a)anthracene         mg/kg         NA           Benzo(a)pyrene         mg/kg         NA           Benzo(b)fluoranthene         mg/kg         NA           Benzo(g,h,1)pcrylene         mg/kg         NA           Benzo(k)fluoranthene         mg/kg         NA           Benzol (k)fluoranthene         mg/kg         NA           Benzyl alcohol         mg/kg         NA           Benzyl alcohol         mg/kg         NA		racene	mg/kg	NA	0.38	NA	NA
Benzo(a)pyrene         mg/kg         NA           Benzo(a)pyrene         mg/kg         NA           Benzo(b)fluoranthene         mg/kg         NA           Benzo(g,h,1)perylene         mg/kg         NA           Benzo(k)fluoranthene         mg/kg         NA           Benzo(k)fluoranthene         mg/kg         NA           Benzyl alcohol         mg/kg         NA           Benzyl alcohol         mg/kg         NA	$\neg$	nite (total)	mg/kg	NA	0.37 U	NA	NA
Benzo(b)fluorantheme         mg/kg         NA           Benzo(b,1)perylene         mg/kg         NA           Benzo(g,h,1)perylene         mg/kg         NA           Benzo(k)fluoranthene         mg/kg         NA           Benzol acid         mg/kg         NA           Benzyl alcohol         mg/kg         NA           Benzyl hirtyl nhthalate         mg/kg         NA	$\neg$	o(a)anthracene	mg/kg	NA	2	NA	NA
mg/kg         NA           mg/kg         NA           mg/kg         NA           mg/kg         NA           mg/kg         NA           mg/kg         NA	$\neg$	o(a)pyrene	mg/kg	NA	1.8	NA	NA
mg/kg         NA           mg/kg         NA           mg/kg         NA           mg/kg         NA           mg/kg         NA           mg/kg         NA		o(b)fluoranthene	mg/kg	NA	2.2	NA	NA
mg/kg         NA           mg/kg         NA           mg/kg         NA           mg/kg         NA		o(g,h,ı)perylene	mg/kg	NA	1.3	NA	NA
mg/kg NA mg/kg NA		o(k)fluoranthene	mg/kg	NA	1.4	NA	NA
mg/kg NA	SW8270C Benz	oic acid	mg/kg	NA	Ω 81 0	NA	NA
ΔN NA	SW8270C Benz	yl alcohol	mg/kg	NA	0.11 U	NA	NA
Time of the state		yl butyl phthalate	mg/kg	NA	0.12 U	NA	NA
SW8270C  bis(2-Chloroethoxy)methane   mg/kg NA 0.061 U	$\overline{}$	-Chloroethoxy)methane	mg/kg	NA	0.061 U	NA	NA

Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

		$\overline{}$	_	$\overline{}$	┯	7	1	_	<del>-</del>	_	$\overline{}$	7	_	7=	$\overline{}$	₹			7								_		1	1	┰			г
WHGLTA050 05 ft 2001-02-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA NA	NA	NA	NA	NA	NA	NA
WHGLTA050 00 ft 2001-02-07	NA	NA	AN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ΝA	NA	NA	NA	NA
THGLA0C1905 03 ft 2001-08-15	0.095 U	99 0	0.24 U	2	NA	0.3 U	0.43	0.077 F	Ω 660 0	0.078 U	0.075 U	0.28 U	0.47 U	0.21 U	0.34 U	3.5	0.14 F	0.074 U	0.072 U	0.13 U	0 081 U	1.4 U	0.31 U	1.1	0.052 U	0 22 U	1.5 U	0 35 U	U 750 0	0.066 U	0.35 U	0.11 U	0.18 U	0.11 U
BHGLAOC1913 10 ft 2001-12-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Analyte	bis(2-Chloroethyl)ether (2-Chloroethyl ether)	bis(2-Ethylhexyl)phthalate	Chlorobenzilate	Chrysene	Cresols, m & p	Diallate (total of cis and trans isomers)	Dibenz(a,h)anthracene	Dibenzofuran	Diethyl phthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Dinoseb	Diphenylamıne	Ethyl methanesulfonate	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Hexachlorophene	Hexachloropropene	Indeno(1,2,3-c,d)pyrene	Isophorone	Isosafrole	Methapyrilene	Methyl methanesulfonate	Naphthalene	Nitrobenzene	N-Nitrosodiethylamine	N-Nitrosodimethylamine	N-Nitrosodi-n-butylamine	N-Nitrosodi-n-propylamine
Method	$\neg$	┪			$\neg$	$\neg$		$\neg$			SW8270C			$\equiv$	SW8270C										$\neg$		SW8270C	SW8270C [1	SW8270C	SW8270C				SW8270C

Table E.1 Comprehensive Soil Results AOC 19 NAS Fort Worth JRB, Texas

			BHGLAOC1913 10 ft	THGLA0C1905 03-ft	WHGLTA050 00 ft	WHGLTA050 05 ft
Method	Analyte	Unit	2001-12-05	2001-08-15	2001-02-07	2001-02-07
SW8270C	SW8270C N-Nitrosodiphenylamine	mg/kg	NA	0,11 U	NA	NA
SW8270C	W8270C N-Nitrosomethylethylamine	mg/kg	NA	0.54 U	NA	NA
SW8270C	SW8270C N-Nitrosomorpholine	mg/kg	AN	0 41 U	Ϋ́	AN
SW8270C	SW8270C N-Nitrosopiperidine	mg/kg	NA	0.27 U	NA	NA
SW8270C	SW8270C N-Nitrosopyrrolidine	mg/kg	NA	0 52 U	NA	NA
SW8270C	SW8270C o-Toluidine	mg/kg	AN	0 25 U	NA	NA.
SW8270C	SW8270C p-Dunethylaminoazobenzene	mg/kg	NA	0.39 U	NA	NA
SW8270C	SW8270C Pentachlorobenzene	mg/kg	NA	0.18 U	NA	NA
SW8270C	SW8270C Pentachloronitrobenzene	mg/kg	NA	0.23 U	AZ	AN
SW8270C	SW8270C   Pentachlorophenol	mg/kg	NA	0.19 U	NA	NA
SW8270C	W8270C Phenacetin	mg/kg	NA	0.41 U	NA	NA
SW8270C	SW8270C Phenanthrene	mg/kg	NA	2.1	NA	NA
SW8270C Phenol	Phenol	mg/kg	NA	U 980 U	NA	NA
SW8270C	SW8270C p-Phenylenediamine	mg/kg	NA	0.84 U	NA	NA
SW8270C	SW8270C Pronamide	mg/kg	NA	0,43 U	NA	NA
SW8270C Pyrene	Pyrene	mg/kg	NA	3.6	NA	NA
SW8270C Pyridine	Pyridine	mg/kg	NA	0 11 U	NA	NA
SW8270C Safrole	Safrole	mg/kg	VA	U 6I 0	AN	NA.



Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

			WHGLTA051 00 ft	WHGLTA051 05 ft	WHGLTA052 05 ft
Method	Analyte	Unit	20010207	2001-02-07	2001-02-07
SW6010B	Arsenic	mg/kg		NA	NA
SW6010B	Barıum	mg/kg	NA	AN	NA
SW6010B	Beryllium	mg/kg		NA	NA
SW6010B	Cadmium	mg/kg		NA	NA
SW6010B	Chromium, total	mg/kg	NA	NA	NA
SW6010B	Cobalt	mg/kg		AN	ΑN
SW6010B	Copper	mg/kg		NA	NA
SW6010B	Nickel	mg/kg		NA	NA
SW6010B	Tın	mg/kg		Ϋ́	Ϋ́
SW6010B	Vanadıum	mg/kg		NA	NA
SW6010B	Zınc	mg/kg		NA	NA
SW7041	Antimony	mg/kg		NA	NA
SW7421	Lead	mg/kg		NA	NA
SW7471A	Mercury	mg/kg		NA	NA
SW7740	Selenium	mg/kg		NA	NA
SW7761	Silver	mg/kg		AN	AN
SW7841	Thallium	mg/kg		NA	NA
SW8260B	1,1,1,2-Tetrachloroethane	mg/kg		NA	NA
SW8260B	1,1,1-Trichloroethane	mg/kg	NA	NA	NA
SW8260B	1,1,2,2-Tetrachloroethane	mg/kg	NA	AN	NA
SW8260B	1,1,2-Trichloroethane	mg/kg	NA	NA	NA
SW8260B	1,1-Dichloroethane	mg/kg	NA	NA	NA
SW8260B	1,1-Dichloroethene	mg/kg		NA	NA
SW8260B	1,2,3-Trichloropropane	mg/kg	NA	NA	NA
_	1,2-Dibromo-3-chloropropane	mg/kg	NA	NA	NA
$\neg$	1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	NA	NA
1	1,2-Dichloroethane	mg/kg	NA	NA	NA
7	1,2-Dichloropropane	mg/kg	NA	AN	NA
$\neg$	2-Chloro-1,3-butadiene	mg/kg	NA	NA	NA
	2-Hexanone	mg/kg	NA	NA	AN
Т	Acetone	mg/kg	NA	NA	NA
-	Acetonitrile	mg/kg	NA	NA	NA
Т	Acrolein	mg/kg	NA	NA	NA
SW8260B	Acrylonitrile	mg/kg	NA	NA	NA

Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

^	The state of the s	,	WHGLTA051 00 ft	WHGLTA051 05 ft	WHGLTA052 05 ft
Method	Analyte	Unit	2001-02-07		2001-02-07
	oride (3-Chlo	mg/kg	NA	NA	NA
1	Benzene	mg/kg	NA	NA	NA
SW8260B	Bromodichloromethane	mg/kg	NA	NA	NA
SW8260B	Bromoform	mg/kg	NA	NA	NA
SW8260B	Bromomethane	mg/kg	NA	NA	NA
SW8260B	Carbon dısulfide	mg/kg	NA	NA	NA
SW8260B	Carbon tetrachloride	mg/kg	NA	NA	NA
SW8260B	Chlorobenzene	mg/kg	NA	NA	AN
SW8260B	Chloroethane	mg/kg	NA	NA	VA
SW8260B	Chloroform	mg/kg	NA	NA	NA
SW8260B	Chloromethane	mg/kg	NA	NA	NA
SW8260B	cıs-1,2-Dıchloroethene	mg/kg	NA	NA	NA
SW8260B	cis-1,3-Dichloropropene	mg/kg	NA	NA	NA
SW8260B	Dibromochloromethane	mg/kg	NA	NA	NA
SW8260B	Dibromomethane	mg/kg	NA	AN	NA
SW8260B	Dichlorodifluoromethane	mg/kg	NA	NA	NA
SW8260B	Ethyl methacrylate	mg/kg	NA	NA	NA
SW8260B	Ethylbenzene	mg/kg	NA	NA	NA NA
SW8260B	Iodomethane (Methyl 10d1de)	mg/kg	NA	NA	NA
SW8260B	Isobutanol	mg/kg	NA	NA	VN
SW8260B	m,p-Xylene (sum of 1somers)	mg/kg	NA	NA	VN
SW8260B	Methyl ethyl ketone (2-Butanone)	mg/kg	NA	NA	NA
SW8260B	읟	mg/kg	NA	NA	NA
SW8260B	u	mg/kg	NA	NA	NA
SW8260B	Methylacrylonitrile	mg/kg	NA	NA	NA
SW8260B	Methylene chloride	mg/kg	NA	NA	NA
SW8260B	o-Xylene (1,2-Dimethylbenzene)	mg/kg	NA	NA	NA
SW8260B	Pentachloroethane	mg/kg	NA	NA	NA
SW8260B	Propane nitrile (Propionitrile)	mg/kg	NA	NA	NA
SW8260B	Styrene	mg/kg	NA	NA	NA
SW8260B	Tert-Butyl Methyl Ether	mg/kg	NA	NA	NA
SW8260B	Tetrachloroethene (PCE)	mg/kg	NA	NA	NA
SW8260B		mg/kg	NA	NA	NA
SW8260B	Trans-1,2-Dichloroethene	mg/kg	NA	NA	NA



Table E.1 Comprehensive Soil Results AOC 19 NAS Fort Worth JRB, Texas

				WHGLTA051 00 ft	WHGLTA051 05 ft	WHGLTA052 05 ft
Trans-1.3-Dichloroptene         nigkg         NA         NA           Trans-1.3-Dichloroptene         nigkg         NA         NA           Trichloroeltene (TCE)         nigkg         NA         NA           Trichloroeltene (TCE)         nigkg         NA         NA           1.2.4.5-Tetachlorobenzene         nigkg         NA         NA           1.2.4.5-Tetachlorobenzene         nigkg         NA         NA           1.2.5.4.5-Truntiobenzene         nigkg         NA         NA           1.2.5-Truntiobenzene         nigkg         NA         NA           1.3.5-Truntiobenzene         nigkg         NA         NA           1.3.5-Dichlorobenzene         nigkg         NA         NA           1.3.5-Dichlorobenzene         nigkg         NA         NA           1.3.5-Dichlorobenzene         nigkg         NA         NA           1.3.5-Dichlorobenzene         nigkg         NA         NA           1.4.5-Dichlorobenzene         nigkg         NA         NA           1.4.5-Dichlorobenzene         nigkg         NA         NA           1.4.5-Dichlorobenzene         nigkg         NA         NA           1.4.5-Dichloropenzene         nigkg         NA	Method	Analyte	Unit	2001-02-07	2001-02-07	2001-02-07
Trans. 1-4 Dichloro-2-Buttene         mg/kg         NA         NA           Trichlorochtene (TCE)         mg/kg         NA         NA           Viroly acetate         ng/kg         NA         NA           Vinyl acetate         NA         NA         NA           Vinyl acetate         ng/kg         NA         NA           Vinyl chloride         NA         NA         NA           1.2.4.5-Terrachloroberacene         ng/kg         NA         NA           1.2.4.7-Irrichloroberacene         ng/kg         NA         NA           1.3.4-Dintroberacene         ng/kg         NA         NA           1.3.4-Dintroberacene         ng/kg         NA         NA           1.4-Dioxane (p-Dioxane)         ng/kg         NA         NA           2.2-Torchlorophenol         ng/kg         NA         NA </td <td>SW8260B</td> <td>Trans-1,3-Dichloropropene</td> <td>mg/kg</td> <td>NA</td> <td>NA</td> <td>NA</td>	SW8260B	Trans-1,3-Dichloropropene	mg/kg	NA	NA	NA
Trichlorochtene (TCE)         mg/kg         NA         NA           Trichlorochtene (TCE)         mg/kg         NA         NA           Vmyl actate         ng/kg         NA         NA           Vmyl chlorude         mg/kg         NA         NA           1.2.4.5-Trichlorobenzene         mg/kg         NA         NA           1.2.4.5-Trinntobenzene         mg/kg         NA         NA           1.3.5-Trinntobenzene         mg/kg         NA         NA           1.4.5-Dochlorobenzene         mg/kg         NA         NA           1.4.5-Dochlorobenzene         mg/kg         NA         NA           1.4.5-Dichlorobenzene         mg/kg         NA         NA           1.4.5-Dichlorophenol         mg/kg         NA         NA           2.4.5-Trichlorophenol         mg/kg         NA         NA           2.4.6-Tertrolrophenol         mg/kg         NA         NA <tr< td=""><td>SW8260B</td><td>Trans-1,4-Dichloro-2-Butene</td><td>mg/kg</td><td>NA</td><td>NA</td><td>NA</td></tr<>	SW8260B	Trans-1,4-Dichloro-2-Butene	mg/kg	NA	NA	NA
Trichlorofluoromethane   mg/kg   NA   NA     Virgi acetate   mg/kg   NA   NA   NA     1.2.4.5.Tetrachlorobenzene   mg/kg   NA   NA   NA     1.2.4.5.Tetrachlorobenzene   mg/kg   NA   NA   NA     1.2.4.5.Tetrachlorobenzene   mg/kg   NA   NA   NA     1.3.5.Trinutrobenzene   mg/kg   NA   NA   NA     1.3.5.Trinutrobenzene   mg/kg   NA   NA   NA     1.3.5.Trinutrobenzene   mg/kg   NA   NA   NA   NA     1.3.5.Trinutrobenzene   mg/kg   NA   NA   NA   NA   NA   NA   NA   N	SW8260B	Trichloroethene (TCE)	mg/kg	0.004 U	0.001 F	0.004 U
Vinyl acetate         mg/kg         NA         NA           Vinyl acetate         mg/kg         NA         NA           Vinyl clorude         NA         NA         NA           1.2.4.5-Terablorobenzene         mg/kg         NA         NA           1.2.4.5-Terablorobenzene         mg/kg         NA         NA           1.3.5-Trinutobenzene         mg/kg         NA         NA           1.3.5-Trinutobenzene         mg/kg         NA         NA           1.4.5-Trinutobenzene         mg/kg         NA         NA           1.4.5-Trinutobenzene         mg/kg         NA         NA           1.4.5-Trinutobenzene         mg/kg         NA         NA           1.4.5-Dustinobenzene         mg/kg         NA         NA           1.4.Dustinobenzene         mg/kg         NA         NA           1.4.Dustinophenol         mg/kg         NA         NA           2.5.4-Drintrophenol         mg/kg         NA         NA           2.4.5-Trichlorophenol         mg/kg         NA         NA           2.4-Dintrophenol         mg/kg         NA         NA           2.4-Dintrophenol         mg/kg         NA         NA           2.4-Dintroph	SW8260B	Trichlorofluoromethane	mg/kg	NA	NA	NA
Vinyl chloride         mg/kg         NA         NA           1.2.4.Fractabloroberazene         mg/kg         NA         NA           1.2.4.Fractabloroberazene         mg/kg         NA         NA           1.2.Duchloroberazene         mg/kg         NA         NA           1.3.Duchloroberazene         mg/kg         NA         NA           1.3.Duchloroberazene         mg/kg         NA         NA           1.4.Duchloroberazene         mg/kg         NA         NA           1.4.Duchlorophenol         mg/kg         NA         NA           2.4.G-Trichlorophenol         mg/kg         NA         NA           2.4.Duchlorophenol         mg/kg         NA         NA           2.4.Duchlorophenol         mg/kg         NA         NA           2.6.Dulitrophenol         mg/kg         NA         NA	SW8260B	Vınyl acetate	mg/kg	NA	ΥN	NA
1.2.4.5-Tetrachlorobenzene         mg/kg         NA         NA           1.2.4.5-Tetrachlorobenzene         mg/kg         NA         NA           1.3.5-Trinttrobenzene         mg/kg         NA         NA           1.3.5-Trinttrobenzene         mg/kg         NA         NA           1.3-Dichlorobenzene         mg/kg         NA         NA           1.3-Dichlorobenzene         mg/kg         NA         NA           1.3-Dichlorobenzene         mg/kg         NA         NA           1.4-Dochlorobenzene         mg/kg         NA         NA           1.4-Dochlorobenzene         mg/kg         NA         NA           1.4-Dochlorobenzene         mg/kg         NA         NA           1.4-Dochlorobenzene         mg/kg         NA         NA           1.4-Naphthogunone         mg/kg         NA         NA           1.2-Tochlorophenol         mg/kg         NA         NA           2.1-Sophthoghenol         mg/kg         NA         NA           2.4-Dimetrophenol         mg/kg         NA         NA           2.4-Dimetrophenol         mg/kg         NA         NA           2.4-Dimetrophenol         mg/kg         NA         NA	SW8260B	Vinyl chloride	mg/kg	NA	AN	NA
1.2.4-Truchlorobenzene         mg/kg         NA         NA           1.2.Dechlorobenzene         mg/kg         NA         NA           1.3.Duchlorobenzene         mg/kg         NA         NA           1.3.Duchlorobenzene         mg/kg         NA         NA           1.3.Duchlorobenzene         mg/kg         NA         NA           1.4.Duchlorobenzene         mg/kg         NA         NA           1.4.Duchlorophenzene         mg/kg         NA         NA           2.2Oxybisk1-chlorophenzene         mg/kg         NA         NA           2.3.4.6Tertellorophenzel         mg/kg         NA         NA           2.4.5Tricklorophenzel         mg/kg         NA         NA           2.4.5Tricklorophenzel         mg/kg         NA         NA           2.4.Duchlorophenzel         mg/kg         NA         NA           2.5.Duchlorophenzel         mg/kg         NA         NA	SW8270C	1,2,4,5-Tetrachlorobenzene	mg/kg	NA	AN	NA
1.2-Dichlorobenzene         mg/kg         NA         NA           1.3-5-Trinturobenzene         mg/kg         NA         NA           1.3-Duchlorobenzene         mg/kg         NA         NA           1.4-Dichlorobenzene         mg/kg         NA         NA           1.4-Dichlorophenol         mg/kg         NA         NA           2.2-Oxybis/1-chlorophenol         mg/kg         NA         NA           2.4-Dirchlorophenol         mg/kg         NA         NA           2.4-Dirchlorophenol         mg/kg         NA         NA           2.4-Dirchlorophenol         mg/kg         NA         NA           2.4-Dirntrophenol         mg/kg         NA         NA           2.4-Dirntrophenol         mg/kg         NA         NA           2.5-Dirntrophenol         mg/kg         NA         NA <td< td=""><td>SW8270C</td><td>1,2,4-Trichlorobenzene</td><td>mg/kg</td><td>NA</td><td>NA</td><td>NA</td></td<>	SW8270C	1,2,4-Trichlorobenzene	mg/kg	NA	NA	NA
1.3.5-Trintrobenzene         mg/kg         NA         NA           1.3.Dutlorbenzene         mg/kg         NA         NA           1.3.Dutlorbenzene         mg/kg         NA         NA           1.4.Dutlorobenzene         mg/kg         NA         NA           1.4.Duchlorobenzene         mg/kg         NA         NA           1.4.Duchlorobenzene         mg/kg         NA         NA           1.4.Duchlorobenzene         mg/kg         NA         NA           1.1.Naphthyalmine         MA         NA         NA           1.1.Naphthyalmine         Mg/kg         NA         NA           1.1.Naphthyalmine         Mg/kg         NA         NA           1.1.Naphthyalmine         mg/kg         NA         NA           1.1.Naphthyalmine         mg/kg         NA         NA           2.1.Naphthyalmine         mg/kg         NA         NA           2.4.F.Trichlorophenol         mg/kg         NA         NA           2.4.Dimethylphenol         mg/kg         NA         NA           2.4.Dimethylphenol         mg/kg         NA         NA           2.4.Dimethylphenol         mg/kg         NA         NA           2.4.Dimethylphenol </td <td>SW8270C</td> <td>1,2-Dichlorobenzene</td> <td>mg/kg</td> <td>NA</td> <td>NA</td> <td>NA</td>	SW8270C	1,2-Dichlorobenzene	mg/kg	NA	NA	NA
1.3-Dichloroberacene         mg/kg         NA         NA           1.3-Dirutroberazene         mg/kg         NA         NA           1.4-Dioxane (P-Dioxane)         mg/kg         NA         NA           1.4-Naphthoquinone         mg/kg         NA         NA           1.4-Naphthoquinone         mg/kg         NA         NA           2.2-Oxybis(1-chlorophenol         mg/kg         NA         NA           2.3-A-Critchlorophenol         mg/kg         NA         NA           2.4-Dichlorophenol         mg/kg         NA         NA           2.4-Dichlorophenol         mg/kg         NA         NA           2.4-Dichlorophenol         mg/kg         NA         NA           2.4-Dichlorophenol         mg/kg         NA         NA           2.4-Dintroplenol         mg/kg         NA         NA           2.4-Dintroplenol         mg/kg         NA         NA           2.4-Dintroplenol         mg/kg         NA         NA           2.5-Dintroplenol         mg/kg         NA         NA           2.5-Dintroplenol         mg/kg         NA         NA           2.5-Dintroplenol         mg/kg         NA         NA           2.Chloroph	SW8270C	1,3,5-Trinitrobenzene	mg/kg	NA	NA	NA
1.3-Dintroberazene         mg/kg         NA         NA           1.4-Dichloroberazene         mg/kg         NA         NA           1.4-Dichloroberazene         mg/kg         NA         NA           1.4-Dichloroberazene         mg/kg         NA         NA           1.1-Naphthylamine         mg/kg         NA         NA           2.1-Oxybis(1-chlorophenol         mg/kg         NA         NA           2.2-Oxybis(1-chlorophenol         mg/kg         NA         NA           2.4-F.Trichlorophenol         mg/kg         NA         NA           2.4-Dirichlorophenol         mg/kg         NA         NA           2.5-Dirichlorophenol         mg/kg         NA         NA           2.5-Dirichlorophenol         mg/kg         NA         NA           2.C-Dinitrotoluene         mg/kg         NA         NA	SW8270C	1,3-Dichlorobenzene	mg/kg	NA	NA	NA
1.4-Dichlorobenzene         mgkg         NA         NA           1.4-Dichlorobenzene         mg/kg         NA         NA           1.4-Dioxane (p-Dioxane)         mg/kg         NA         NA           1.4-Naphthoquinone         mg/kg         NA         NA           1.1-Anaphthoquinone         mg/kg         NA         NA           2.2-Oxybis(1-chlorophenol         mg/kg         NA         NA           2.4.5-Trichlorophenol         mg/kg         NA         NA           2.4-Dichlorophenol         mg/kg         NA         NA           2.4-Dichlorophenol         mg/kg         NA         NA           2.4-Dichlorophenol         mg/kg         NA         NA           2.4-Dintrophenol         mg/kg         NA         NA           2.4-Dintrophenol         mg/kg         NA         NA           2.5-Dichlorophenol         mg/kg         NA         NA           2.6-Dichlorophenol         mg/kg         NA         NA           2.6-Dintroplusene         mg/kg         NA         NA           2.7-Dintroplusene         mg/kg         NA         NA           2.7-Dintrophenol         mg/kg         NA         NA           2.Aminon	SW8270C	1,3-Dinitrobenzene	mg/kg	NA	NA	NA
1.4-Dioxane (p-Dioxane)         mg/kg         NA         NA           1.4-Naphthogumone         mg/kg         NA         NA           1Naphthogumone         mg/kg         NA         NA           2.2-Oxybas(1-chloroptenol         mg/kg         NA         NA           2.2-Oxybas(1-chloroptenol         mg/kg         NA         NA           2.4-Dichloroptenol         mg/kg         NA         NA           2.4-Dichloroptenol         mg/kg         NA         NA           2.4-Dichloroptenol         mg/kg         NA         NA           2.4-Dichloroptenol         mg/kg         NA         NA           2.4-Dintrophenol         mg/kg         NA         NA           2.4-Dintrophenol         mg/kg         NA         NA           2.4-Dintrophenol         mg/kg         NA         NA           2.5-Dichlorophenol         mg/kg         NA         NA           2.6-Dintrophenol         mg/kg         NA         NA           2.6-Dintrophenol         mg/kg         NA         NA           2Arminonaphthalene (beta-Naphthylamine)         mg/kg         NA         NA           2Mcthylmaphthalene (beta-Naphthylamine)         mg/kg         NA         NA </td <td>SW8270C</td> <td>1,4-Dichlorobenzene</td> <td>mg/kg</td> <td>NA</td> <td>AN</td> <td>AN</td>	SW8270C	1,4-Dichlorobenzene	mg/kg	NA	AN	AN
1.4-Naphthogumone         mg/kg         NA         NA           1Naphthogumone         mg/kg         NA         NA           2.2-Oxybis(1-chlorophenol         mg/kg         NA         NA           2.4.4-G-Trichlorophenol         mg/kg         NA         NA           2.4-Dichlorophenol         mg/kg         NA         NA           2.4-Dichlorophenol         mg/kg         NA         NA           2.4-Dintrophenol         mg/kg         NA         NA           2.5-Dintrophenol         mg/kg         NA         NA           2.5-Dintrophenol         mg/kg         NA         NA           2.6-Dintrophenol         mg/kg         NA         NA           2.5-Dintrophenol         mg/kg         NA         NA           2Acetylaminofluorene         mg/kg         NA         NA           2Alvinoraphthallene <td>SW8270C</td> <td>1,4-Dioxane (p-Dioxane)</td> <td>mg/kg</td> <td>NA</td> <td>AN</td> <td>NA</td>	SW8270C	1,4-Dioxane (p-Dioxane)	mg/kg	NA	AN	NA
1-Naphthylamine         mg/kg         NA         NA           2,2'-Oxybis(1-chloropropane)         mg/kg         NA         NA           2,3-4.6-Tetrachlorophenol         mg/kg         NA         NA           2,4-6-Trichlorophenol         mg/kg         NA         NA           2,4-Drichlorophenol         mg/kg         NA         NA           2,4-Drintrophenol         mg/kg         NA         NA           2,4-Dinitrophenol         mg/kg         NA         NA           2,4-Dinitrophenol         mg/kg         NA         NA           2,4-Dinitrophenol         mg/kg         NA         NA           2,5-Dinitrophenol         mg/kg         NA         NA           2,6-Dinitrophenol         mg/kg         NA         NA           2,6-Dinitrophenol         mg/kg         NA         NA           2,6-Dinitrophenol         mg/kg         NA         NA           2,7-Archiorophthalene         mg/kg         NA         NA           2,7-Archiorophthalene         mg/kg         NA         NA           2,7-Morophenol         mg/kg         NA         NA           2,7-Morophenol         mg/kg         NA         NA           2,7-Morop	SW8270C	1,4-Naphthogumone	mg/kg	NA	NA	NA
1.2. Oxybis(1-chloropropane)         mg/kg         NA         NA           2.3.4.6-Tetrachlorophenol         mg/kg         NA         NA           2.4.6-Trichlorophenol         mg/kg         NA         NA           2.4.5-Trichlorophenol         mg/kg         NA         NA           2.4-Dichlorophenol         mg/kg         NA         NA           2.4-Dintrotoluene         mg/kg         NA         NA           2.4-Dintrotoluene         mg/kg         NA         NA           2.5-Dintrotoluene         mg/kg         NA         NA           2.5-Di	- 4	1-Naphthylamine	mg/kg	NA	AN	NA
2,3,4,6-Tetrachlorophenol         mg/kg         NA         NA           2,4,6-Tetrachlorophenol         mg/kg         NA         NA           2,4,5-Trichlorophenol         mg/kg         NA         NA           2,4-6-Trichlorophenol         mg/kg         NA         NA           2,4-Dintentylphenol         mg/kg         NA         NA           2,5-Dichlorophenol         mg/kg         NA         NA           2,6-Dichlorophenol         mg/kg         NA         NA           2,6-Dichlorophenol         mg/kg         NA         NA           2,6-Dichlorophenol         mg/kg         NA         NA           2,6-Dintentophenol         mg/kg         NA         NA           2,7-Dintentophenol         mg/kg         NA         NA           2,7-Dintentophenol         mg/kg         NA         NA           2,7-Diothylphenol         nA         NA         NA <t< td=""><td></td><td>2,2'-Oxybis(1-chloropropane)</td><td>mg/kg</td><td>NA</td><td>NA</td><td>AN</td></t<>		2,2'-Oxybis(1-chloropropane)	mg/kg	NA	NA	AN
2,4,5-Trichlorophenol         mg/kg         NA         NA           2,4,6-Trichlorophenol         mg/kg         NA         NA           2,4-Dichlorophenol         mg/kg         NA         NA           2,4-Dinettylphenol         mg/kg         NA         NA           2,5-Dichlorophenol         mg/kg         NA         NA           2,6-Dinitrotoluene         mg/kg         NA         NA           2,6-Dinitro	- 1	2,3,4,6-Tetrachlorophenol	mg/kg	NA	VN	NA
2,4,6-Trichlorophenol         mg/kg         NA         NA           2,4-Dichlorophenol         mg/kg         NA         NA           2,4-Dintcrophenol         mg/kg         NA         NA           2,4-Dintcrophenol         mg/kg         NA         NA           2,4-Dintcrophenol         mg/kg         NA         NA           2,4-Dintcrophenol         mg/kg         NA         NA           2,6-Dichlorophenol         mg/kg         NA         NA           2,6-Dintcrooluene         mg/kg         NA         NA           3,6-Dintcrooluene         mg/kg         NA         NA           4,6-Dintcrooluene         mg/kg         NA         NA           5,6-Dintcrooluene	SW8270C	2,4,5-Trichlorophenol	mg/kg	NA	NA	NA
2,4-Dichlorophenol         mg/kg         NA         NA           2,4-Dimethylphenol         mg/kg         NA         NA           2,4-Dimtrophenol         mg/kg         NA         NA           2,4-Dintrotoluene         mg/kg         NA         NA           2,6-Dichlorophenol         mg/kg         NA         NA           2,6-Dichlorophenol         mg/kg         NA         NA           2-Acetylaminofluorene         mg/kg         NA         NA           2-Aminonaphthalene (beta-Naphthylamine)         mg/kg         NA         NA           2-Chlorophenol         mg/kg         NA         NA           2-Chlorophenol         mg/kg         NA         NA           2-Methylnaphthalene         mg/kg         NA         NA           2-Methylnaphthalene         mg/kg         NA         NA           2-Methylphenol (o-Cresol)         mg/kg         NA         NA           2-Methylphenol (o-Cresol)         mg/kg         NA         NA           2-Nitroanline         nA         NA         NA           2-Nitroanline         NA         NA         NA	SW8270C	2,4,6-Trichlorophenol	mg/kg	NA	NA	NA
2,4-Dimethylphenol         mg/kg         NA         NA           2,4-Dinitrophenol         mg/kg         NA         NA           2,4-Dinitrophenol         mg/kg         NA         NA           2,6-Dichlorophenol         mg/kg         NA         NA           2,6-Dinitrotoluene         mg/kg         NA         NA           2-Acetylaminofluorene         mg/kg         NA         NA           2-Aminonaphthalene         hg/kg         NA         NA           2-Chlorophenol         mg/kg         NA         NA           2-Chlorophenol         mg/kg         NA         NA           2-Methylphenol (o-Cresol)         mg/kg         NA         NA           2-Methylphenol (o-Cresol)         mg/kg         NA         NA           2-Nitroanline         mg/kg         NA         NA           2-Nitroanline         mg/kg         NA         NA           2-Nitrophenol         mg/kg         NA         NA	SW8270C	2,4-Dichlorophenol	mg/kg	NA	NA	AN
2,4-Dinitrophenol         mg/kg         NA         NA           2,4-Dinitrophenol         mg/kg         NA         NA           2,6-Dichlorophenol         mg/kg         NA         NA           2,6-Dinitrotoluene         mg/kg         NA         NA           2-Acetylaminofluorene         mg/kg         NA         NA           2-Acetylaminofluorene         mg/kg         NA         NA           2-Chloronaphthalene         mg/kg         NA         NA           2-Chlorophenol         mg/kg         NA         NA           2-Methylphenol (o-Cresol)         mg/kg         NA         NA           2-Methylphenol (o-Cresol)         mg/kg         NA         NA           2-Nitroanline         mg/kg         NA         NA           2-Nitroanline         mg/kg         NA         NA           2-Nitrophenol         mg/kg         NA         NA	SW8270C	2,4-Dimethylphenol	mg/kg	NA	NA	NA
2,4-Dinitroluene         mg/kg         NA         NA           2,6-Dichlorophenol         mg/kg         NA         NA           2,6-Dinitrotoluene         mg/kg         NA         NA           2-Acetylaminofluorene         mg/kg         NA         NA           2-Aminonaphthalene (beta-Naphthylamine)         mg/kg         NA         NA           2-Chloronaphthalene         mg/kg         NA         NA           2-Chlorophenol         mg/kg         NA         NA           2-Methylnaphthalene         mg/kg         NA         NA           2-Methylnaphthalene         mg/kg         NA         NA           2-Methylnaphthalene         mg/kg         NA         NA           2-Methylphenol (o-Cresol)         mg/kg         NA         NA           2-Methylphenol (o-Cresol)         mg/kg         NA         NA           2-Nitroanline         mg/kg         NA         NA           2-Nitrophenol         mg/kg         NA         NA	SW8270C	2,4-Dinitrophenol	mg/kg	NA	NA	NA
2,6-Dichlorophenol         mg/kg         NA         NA           2,6-Dinitrotoluene         mg/kg         NA         NA           2-Acetylaminofluorene         mg/kg         NA         NA           2-Aminonaphthalene (beta-Naphthylamine)         mg/kg         NA         NA           2-Chlorophcnol         mg/kg         NA         NA           2-Chlorophcnol         mg/kg         NA         NA           2-Methylnaphthalene         mg/kg         NA         NA           2-Methylnaphthalene         mg/kg         NA         NA           2-Methylphenol (o-Cresol)         mg/kg         NA         NA           2-Methylphenol (o-Cresol)         mg/kg         NA         NA           2-Nitroanline         mg/kg         NA         NA           2-Nitrophenol         mg/kg         NA         NA	SW8270C	2,4-Dinitrotoluene	mg/kg	NA	NA	NA
2.6-Dinitrotoluene         mg/kg         NA         NA           2-Acetylaminofluorene         mg/kg         NA         NA           2-Aminonaphthalene (beta-Naphthylamine)         mg/kg         NA         NA           2-Chlorophcnol         mg/kg         NA         NA           2-Chlorophcnol         mg/kg         NA         NA           2-Methylnaphthalene         mg/kg         NA         NA           2-Methylnaphthalene         mg/kg         NA         NA           2-Methylphenol (o-Cresol)         mg/kg         NA         NA           2-Methylphenol (o-Cresol)         mg/kg         NA         NA           2-Nitroanline         mg/kg         NA         NA           2-Nitrophenol         mg/kg         NA         NA	SW8270C	2,6-Dichlorophenol	mg/kg	NA	NA	NA
2-Acetylaminofluorene         mg/kg         NA         NA           2-Aminonaphthalene (beta-Naphthylamine)         mg/kg         NA         NA           2-Chloronaphthalene         mg/kg         NA         NA           2-Chlorophenol         mg/kg         NA         NA           2-Methylnaphthalene         mg/kg         NA         NA           2-Methylphenol (o-Cresol)         mg/kg         NA         NA           2-Nitroaniline         mg/kg         NA         NA           2-Nitroaniline         mg/kg         NA         NA           2-Nitrophenol         mg/kg         NA         NA	SW8270C	2,6-Dinitrotoluene	mg/kg	NA	NA	NA
2-Aminonaphthalene (beta-Naphthylamine)         mg/kg         NA         NA           2-Chloronaphthalene         mg/kg         NA         NA           2-Methylnaphthalene         mg/kg         NA         NA           2-Methylphenol (o-Cresol)         mg/kg         NA         NA           2-Nitroanline         mg/kg         NA         NA           2-Nitroanline         mg/kg         NA         NA           2-Nitrophenol         mg/kg         NA         NA	SW8270C	2-Acetylaminofluorene	mg/kg	NA	NA	NA
2-Chloronaphthalene         mg/kg         NA         NA           2-Chlorophenol         mg/kg         NA         NA           2-Methylnaphthalene         mg/kg         NA         NA           2-Methylphenol (o-Cresol)         mg/kg         NA         NA           2-Nitroaniline         mg/kg         NA         NA           2-Nitrophenol         mg/kg         NA         NA	SW8270C	2-Aminonaphthalene (beta-Naphthylamine)	mg/kg	NA	NA	AN
2-Chlorophenol         mg/kg         NA         NA           2-Methylnaphthalene         mg/kg         NA         NA           2-Methylphenol (o-Cresol)         mg/kg         NA         NA           2-Nitroaniline         mg/kg         NA         NA           2-Nitrophenol         mg/kg         NA         NA	SW8270C	2-Chloronaphthalene	mg/kg	NA	NA	NA
2-Methylnaphthalene         mg/kg         NA         NA           2-Methylphenol (o-Cresol)         mg/kg         NA         NA           2-Nitroaniline         mg/kg         NA         NA           2-Nitrophenol         mg/kg         NA         NA	SW8270C	2-Chlorophenol	mg/kg	NA	NA	NA
2-Methylphenol (o-Cresol)         mg/kg         NA         NA           2-Nutroamline         mg/kg         NA         NA           2-Nitrophenol         mg/kg         NA         NA	SW8270C	2-Methylnaphthalene	mg/kg	NA	NA	NA
2-Nitroaniline         mg/kg         NA         NA           2-Nitrophenol         mg/kg         NA         NA	SW8270C	2-Methylphenol (o-Cresol)	mg/kg	NA	NA	NA
Z-Nitrophenol mg/kg NA NA	SW8270C	2-Nitroaniine	mg/kg	NA	NA	NA
	2W82/UC	2-Nitrophenol	mg/kg	NA	NA	NA

Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

			WHGLTA051 00 ft	WHGLTA051 05 ft	WHGLTA052 05 ft
Method	Analyte	Unit	2001-02-07	2001-02-07	2001-02-07
SW8270C	2-Picoline (alpha-Pico	mg/kg	NA	NA	NA
SW8270C	3,3'-Dichlorobenzidine	mg/kg	NA	NA	NA
SW8270C		mg/kg	NA	NA	NA
SW8270C	_	mg/kg	NA	NA	NA
SW8270C	3-Nitroaniline	mg/kg	NA	NA	NA
SW8270C	4,6-Dimtro-2-methylph	mg/kg	NA	NA	NA
SW8270C	4-Aminobiphenyl (4-Bi	mg/kg	NA	NA	NA
SW8270C	4-Bromophenyl phenyl	mg/kg	NA	NA	NA
SW8270C	$\neg$	mg/kg	NA	NA	NA
SW8270C	4-Chloroanline	mg/kg	NA	NA	NA
SW8270C	4-Chlorophenyl phenyl	mg/kg	NA	NA	NA
SW8270C	4-Methylphenol (P-Cresol)	mg/kg	NA	NA	NA
SW8270C	4-Nitroaniline	mg/kg	NA	NA	NA
SW8270C	SW8270C 4-Nitrophenol	mg/kg	NA	AN	NA
SW8270C	SW8270C 4-Nitroquinoline-1-oxide	mg/kg	NA	NA	NA
SW8270C	SW8270C 5-Nitro-o-toluidine	mg/kg	NA	NA	NA
SW8270C		mg/kg	NA	VN	NA
SW8270C		mg/kg	NA	VN	NA
SW8270C	┰	mg/kg	NA	ΨN	NA
SW8270C		mg/kg	NA	NA	NA
SW8270C	alpha, alpha-Dimethylphenethylamine	mg/kg	NA	VA	NA
SW8270C	Anıline (Phenylamine, Amınobenzene)	mg/kg	NA	W	NA
SW8270C	$\overline{}$	mg/kg	NA	NA	NA
SW8270C	_	mg/kg	NA	NA	NA
SW8270C		mg/kg	NA	NA	NA
SW8270C	Benzo(a)pyrene	mg/kg	NA	NA.	NA
SW8270C	Ŧ	mg/kg	NA	NA	NA
SW8270C	Benzo(g,h,1)perylene	mg/kg	NA	VN	NA
SW8270C	SW8270C Benzo(k)fluoranthene	mg/kg	NA	VN	NA
SW8270C	Benzoic acid	mg/kg	NA	NA	NA
SW8270C	Benzyl alcohol	mg/kg	NA	VN	NA
SW8270C	Benzyl butyi phthalate	mg/kg	NA	W	NA
SW8270C	bis(2-Chloroethoxy)methane	mg/kg	NA	NA	NA

Table E.1 Comprehensive Soil Results AOC 19 NAS Fort Worth JRB, Texas

-			WHGLTA051 00 ft	WHGLTA051 05 ft	WHGLTA052 05 ft
Method	Analyte	Unit	2001-02-07	2001-02-07	2001-02-07
SW8270C	bis(2-Chloroethyl)ether (2-Chloroethyl ether)	mg/kg	NA	NA	NA
SW8270C	)phtha	mg/kg	NA	NA	NA
SW8270C	Chlorobenzulate	mg/kg	NA	NA	NA
SW8270C	Chrysene	mg/kg	NA	NA	NA
SW8270C	Cresols, m & p	mg/kg	NA	ΨN	NA
SW8270C	Diallate (total of cis and trans isomers)	mg/kg	NA	NA	NA
SW82/0C	Dibenz(a,h)anthracene	mg/kg	NA	NA	NA
SW8270C	Dibenzofuran	mg/kg	NA	VN	NA
SW8270C	Diethyl phthalate	mg/kg	NA	NA	NA
SW8270C	Dimethy! phthalate	mg/kg	NA	VΝ	NA
SW8270C	Di-n-butyi phthalate	mg/kg	NA	NA	NA
SW8270C	Di-n-octyl phthalate	mg/kg	NA	NA	NA
	Dinoseb	mg/kg	NA	WA	NA
SW8270C	Diphenylamine	mg/kg	NA	ΨN	NA
SW8270C	Ethyl methanesulfonate	mg/kg	NA	NA	NA
	Fluoranthene	mg/kg	NA	NA	NA
SW8270C		mg/kg	NA	NA	AN
		mg/kg	NA	NA	NA
SW8270C	Hexachlorobutadiene	mg/kg	NA	NA	NA
SW8270C	SW8270C Hexachlorocyclopentadiene	mg/kg	NA	NA	NA
	Hexachloroethane	mg/kg	NA	NA	NA
	Hexachlorophene	mg/kg	NA	NA	NA
SW8270C	Hexachloropropene	mg/kg	NA	NA	NA
3w82/0C	SW8Z/UC Indeno(1,2,3-c,d)pyrene	mg/kg	NA	NA	NA
3w82/0C	SW8Z/UC Isophorone	mg/kg	NA	NA	NA
	Isosatrole	mg/kg	NA	NA	NA
		mg/kg	NA	NA	NA
	Methyl methanesuitonate	mg/kg	NA	NA	NA
$\neg$	Naphthalene	mg/kg	NA	NA	NA
_	Nitrobenzene	mg/kg	NA	NA	NA
	N-Nitrosodiethylamine	mg/kg	NA	NA	NA
	N-Nitrosodimethylamine	mg/kg	NA	NA	NA
- 1	N-Nitrosodi-n-butylamine	mg/kg	NA	NA	NA
SW82/0C	N-Nitrosodi-n-propylamine	mg/kg	NA	NA	NA

Table E.1
Comprehensive Soil Results
AOC 19
NAS Fort Worth JRB, Texas

ę			WHGLTA051 00 ft	WHGLTA051 05 ft	WHGLTA052 05 ft
Method :	Analyte	Unit	2001-02-07	2001-02-07	2001-02-07
SW8270C	SW8270C N-Nitrosodiphenylamine	mg/kg	NA	NA	NA
SW8270C	SW8270C N-Nitrosomethylethylamine	mg/kg	NA	NA	NA
SW8270C	SW8270C N-Nitrosomorpholine	mg/kg	NA	NA	NA
SW8270C	SW8270C N-Nitrosopiperidine	mg/kg	NA	NA	NA
SW8270C	SW8270C N-Nitrosopyrrolidine	mg/kg	NA	NA	NA
SW8270C	SW8270C   o-Toluidine	mg/kg	NA	VN	NA
SW8270C	SW8270C p-Dimethylaminoazobenzene	mg/kg	NA	NA	NA
SW8270C	SW8270C Pentachlorobenzene	mg/kg	NA	AN	W
SW8270C	SW8270C Pentachloronitrobenzene	mg/kg	NA	NA	NA
SW8270C	SW8270C   Pentachlorophenol	mg/kg	NA	VN	VN
SW8270C	SW8270C Phenacetin	mg/kg	NA	NA	WA
SW8270C	SW8270C Phenanthrene	mg/kg	NA	NA	NA
SW8270C Phenol	Phenol	mg/kg	NA	AN	VN
SW8270C	SW8270C  p-Phenylenediamine	mg/kg	NA	WA	ΨN
SW8270C Pronamide	Pronamide	mg/kg	NA	VN	NA
SW8270C Pyrene	Pyrene	mg/kg	NA	NA	AN
SW8270C Pyridine	Pyridine	mg/kg	NA	NA	W
SW8270C   Safrole	Safrole	mg/kg	NA	NA	AN



Table E.2
Comprehensive Groundwater Results
AOC 19
NAS Fort Worth JRB, Texas

2001-03-26 2001-06-15 2001-02-21 0.45 0.66 0.15 J	WHGLTA004	WHGLTA	WHGLTA	3	WHGLTA004	WHGLTA004	WHCI TARE	WHOLTANSO
0.45 0.66 0.15.1	Analyte Unit 2001.		2001	2001-02-22	2001-03-26	2001-06-15	2001-02-21	2001-04-06
	Trichloroethene (TCE) mg/L 0.		0	0.53	0.45	99.0	0.15.1	0 17

Table E.2
Comprehensive Groundwater Results
AOC 19
NAS Fort Worth JRB, Texas

Method         Analyte         Unit         2001-06-15           SW8260B         Trichloroethene (TCE)         mg/L         0.26								
		,	, ,	WHGLTA050	WHGLTA051	WHGLTA051	WHGLTA051	WHGLTA052
SW8260B Trichloroethene (TCE)   mg/L   0.26	Method	Analyte	Unit	2001-06-15	2001-02-22	2001-04-06	2001-06-15	2001-02-22
	SW8260B	Trichloroethene (TCE)	mg/L	0.26	0.19	0 17	0.31	0.3

Table E.2
Comprehensive Groundwater Results
AOC 19
NAS Fort Worth JRB, Texas

) )	,	WHGLTA052	WHGLTA052	WHGLTA801	WHGLTA801	WHGLTA801	
Analyte	Unit	2001-04-06	2001-06-26	2001-02-22	2001-02-22 Dup	2001-04-06	
roethene (TCE)	mg/L	0.3	0.57	0.36	0.26	0.15	

Method SW8260B

Table E.2
Comprehensive Groundwater Results
AOC 19
NAS Fort Worth JRB, Texas

	****	,	WHGLTA801	WHGLTA801	WHGLTA801
Method	Analyte	Unit	2001-04-06 Dup	2001-06-14	2001-06-14 Dup
SW8260B	Trichloroethene (TCE)	mg/L	0.17	0.32	0.34

APPENDIX F
FIELD FORMS

## TAB

APPENDIX F

**BORING LOGS** 



Project: DO26 SI - Phase I

Client: AFCEE

Location: AOC 19 - Suspected FTA-B

Northing:

Borehole ID: BHGLAOC1901

Date: 5/12/00

Geologist: Jorie Wilson
Ground Surface Elevation:

Easting:

		SUBSURFACE PROFILE				SAMP	LE	
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	РІО (ррт)	Remarks
1-	###	Silty Clay 10YR 3/2 Silty clay, very stiff, with 5% coarse sand, non-plastic.	602	CL	. 100%	Dry		
3-4-5-	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Sandy Clayey Silt  10YR 3/2 Clayey silt with 5% coarse sand and pebbles Stiff Grading to 10YR 4/2 at 3 5' with increasing sand and pebbles to 20% at 6'		ML	100%	Dry		
			598					
7-	 	Sandy Clayey Silt with Gravel 10YR 5/4 Yellowish brown clayey silt, stiff, slightly plastic, with 20% coarse sand and pebbles, angular to subangular gravel from 7-8'	596	ML	100%	Dry		
9-	/	Sand with Clay 10YR 6/4 Light yellowish brown poorly sorted sand with clay and 10% subrounded to subangular gravel Increasing clay from 13-14'.			100%	Dry		
11-				500				Wet @ 10 5'
12-	- - -			SC	100%	Wet		
13-	·. 					. = -		
14-	: :		590					End of boring 14'
15-								

Drilled By ESN-South/John Braden

Drill Method DPT

Drilling Equipment SP-4

HydroGeoLogic, Inc 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180

Hole Size. 2"

Total Depth Drilled: 14



Project: DO26 SI - Phase I

Client: AFCEE

Location: AOC 19 - Suspected FTA-B

Northing:

Borehole ID: BHGLAOC1902

Date: 5/15/00

Geologist: Jorie Wilson

Ground Surface Elevation:

Easting:

		SUBSURFACE PROFILE		-	5	SAMP	LE_	
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	РІО (ррт)	Remarks
1-	# # # # # •	Silty Clay 10YR 3/2 Silty clay, very stiff, with 5% coarse sand, non-plastic  Sandy Clayey Silt with Pebbles	599	CL	100%	Dry		Sample collected BHGLAOC1902-01 @ 1'
3 4 4 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		10YR 3/2 Clayey silt with 30% coarse sand and pebbles Subrounded to subangular gravel at 5%  Coarse sand and pebbles decrease to 10% from 7 to 8'		GM	100%	Dry		Sample collected BHGLAOC1902-02 @ 5'
7			594		100%	Dry		
9		Silty Sand 2 5Y 7/3 Pale yellow coarse silty sand with subrounded to rounded pebbles and some clay		SM	75%	Wet		Wet @ 9 5'
11-		Gravel 2 5YR Angular fossiliferous gravel	591 591	GP				End of boring 11'

Drilled By: ESN-South/John Braden

Drill Method, DPT

Drilling Equipment SP-4

HydroGeoLogic, Inc. 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180

Hole Size: 2"

Total Depth Drilled: 11



Project No: AFC001-26CC Project: DO26 SI - Phase I

Client: AFCEE

Location: AOC 19 - Suspected FTA-B

Northing:

Borehole ID: BHGLAOC1903

Date: 5/15/00

Geologist: Jorie Wilson
Ground Surface Elevation:

Easting:

		SUBSURFACE PROFILE				SAMP	LE	
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	PID (ppm)	Remarks
1	1	Clayey Silt with Sand 10YR 3/2 Clayey silt with coarse sand and pebbles (10%), stiff  Silty Clay with Sand 10YR 6/3 Pale brown silty clay Stiff, with coarse sand and pebbles (10%)  Medium to coarse sand (20%) from 5-6'	598	ML	80%	Dry		Sample collected BHGLAOC1903-01 @ 1'
4			500	CL	100%	Dry		Sample collected BHGLAOC1903-02 @ 5'
6- - - 7-		Sandy Pebbly Clay 10YR 7/6 Yellow poorly sorted sandy, pebbly (50%), clay	593	CL	100%	Moist		
8-		Clayey Sand with Gravel 10YR 7/6 Clayey coarse sand with pebbles and subrounded to subangular gravel (50%)	591 590	SC	60%	Wet	,	Wet @ 8'
10-	Æ,	Silty Clay 10YR 6/6 Brownish yellow silty clay Medium stiff Plastic. Bottom 1" is subangular rock fragments	589	CL				Refusal @ 9 5'

Drilled By: ESN-South/John Braden

Drill Method, DPT

Drilling Equipment SP-4

HydroGeoLogic, Inc 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180 Hole Size: 2"

Total Depth Drilled 9 5'



Project No: AFC001-26CC Project: DO26 SI - Phase I

Client: AFCEE

Location: AOC 19 - Suspected FTA-B

Northing:

Borehole ID: BHGLAOC1904

Date: 5/15/00

Geologist: Jorie Wilson
Ground Surface Elevation:

Easting:

		SUBSURFACE PROFILE				SAMP	LE	
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	PID (ppm)	Remarks
1		Silty Clay With Sand and Pebbles 10YR 4/1 Dk grey silty clay with coarse sand and pebbles		CL	100%	Dry		BHGLAOC1904-01and MS/MSD collected at 1040 at 1'
3	<b>-</b>	City Co. ad	597					
4-	****	Silty Sand 10YR 5/2 greyish brown stiff silty sand w/10% coarse sand and pebbles, dry Coarse sand and pebbles increase to 30% from 4 5-5'	595	SM	100%	Dry		
5 -		Silty Clay	595					
6-		2 5Ý 6/6 ólive yellow silty clay, soft, plastic	594	CL				BHGLAOC1904-02 @ 5' collected at 1100
7-		Clay With Sand and Pebbles 10YR 8/1 white clay w/50% medium to coarse sand and pebbles 10YR 6/6 brownish yellow sand mottles at 7'	592	SP	100%	Wet		Wet @ 7'
9-		Sand With Pebbles and Clay 10YR 6/4 light yellowish brown coarse sand with pebbles and clay No clay from 9-10'		SP	80%	Wet		
10	<u>-</u>		590					Refusal at 10'
11-								

Drilled By: ESN-South/John Braden

Drill Method, DPT

Drilling Equipment SP-4

HydroGeoLogic, Inc 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180

Hole Size. 2"

Total Depth Drilled, 10



Project: Phase Ii SI

Client: AFCEE

Location: NAS FW JRB

Northing: 6962878 146

Borehole ID: BHGLAOC1905

Date: 8/20/2001

Geologist: M Johnston

Ground Surface Elevation: 601 995

Easting: 2295904 395

		SUBSURFACE PROFILE				SAMP	LE	
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	PID (ppm)	Remarks
1-		Silty Clay Concrete from 0 - 0 25' 10 YR 2/2 very dark brown silty clay, medium stiff, homogeneous  Silty Clay	600	CL	100%	Dry	00	Collect BHGLAOC1905- 01 from 0.25' - 0.75' at 1530
3		10 YR 4/3 brown silty clay with 5% small gravel (subangular to round) 0 2-0 5mm, medium stiff, dry	599_	CL				
4-		Limestone gravel  Silty Clay 10 YR 5/6 yellowish brown silty clay, stiff, dry	598	GP CL	60%	Dry	00	
5-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	#	Silty Clay 10 YR 5/6 yellowish brown silty clay	596 596	CL	3374			Collect BHGLAOC1905- 02 from 4 75' - 5 25' at 1550
7-		with 10% gravel (2-10mm), stiff, dry  Sand and Gravel 10 YR 6/4 light yellowish brown poorly sorted sand (fine to medium grained) with 50% gravel (1-30mm), angular limestone	594	GM	60%	Dry Moist	0 0	
8-1119-1		Sandy Silty Clay 10 YR 8/4 yellowish brown silty clay with 30% coarse sand and small gravel (rounded to subrounded), medium stiff, damp to moist	593	CL				
10-	-	Sand 10 YR 7/6 yellow poorly sorted sand (fine to medium grained) with 15% gravel (round to subround), chert	591_	sw	50%	Moist	0 0	Collect BHGLAOC1905- 03 from 9.5 - 10' at 1600 Perched water at 10' Refusal at 10.5'
11-								

Drilled By: ESN

Drill Method DPT

Drilling Equipment. Strataprobe

HydroGeoLogic, Inc. 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180

Hole Size: 2"

Total Depth Drilled, 10 5'



Project: Phase II SI

Client: AFCEE

Location: NAS FW JRB

Northing: 6962761.843

Borehole ID: BHGLAOC1906

Date: 8/20/2001

Geologist: M Johnston

**Ground Surface Elevation:** 599.593

Easting: 2295999 029

		SUBSURFACE PROFILE				SAMP	LE	
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	PID (ppm)	Remarks
1-		Blind Probe						Southern delineation boring
3		0.1.0	597					
4-	11	Silty Sand 10 YR 7/1 light gray silty sand (fine to medium grained) with 10% gravel (0 25-1mm), dry	595	SM	Ī			
5		Gravel Limestone gravel Silty Clay	595	LS		Dry	00	Collect BHGLAOC1906- 02 from 5' - 5 5' at 1435
6-		10 YR 2/2 dark brown silty clay, mottled with 10 YR 6/4 fine sand and 10% rounded pebbles (0 25-1mm) Blind Probe	594	CL				02 HOM 5 - 5 0 at 1455
7-								
8-								
9-	<b>4</b>	Sandy Clay with Gravel	591					Collect BHGLAOC1906-
10-		10 YR 4/1 dark gray clay with fine sand and 25% gravel (0 25-1mm) round to subrounded	590	GC		Wet	00	03 from 9.75' - 10 25' at 1450 Perched water at 10'
11-		Gravel 10 YR 5/8 yellowish brown gravel, poorly sorted, subangular to subround, wet, chert, quartz, feldspar	589	GP			_	Refusal at 10 5'
12-								

Drilled By ESN
Drill Method DPT

Drilling Equipment Strataprobe

HydroGeoLogic, Inc 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180

Hole Size 2"

Total Depth Drilled 10 5'



Project: Phase II SI

Client: AFCEE

Location: NAS FW JRB

Northing: 6963045 976

Borehole ID: BHGLAOC1907

Date: 8/20/2001

Geologist: M Johnston

**Ground Surface Elevation:** 604 084

Easting: 2296012 436

		SUBSURFACE PROFILE				SAMP	LE	
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	PID (ppm)	Remarks
1-		Blind Probe						Confirmation sample of TCE at 10' for BHGLAOC1901
3-								
5								
8-1		Silty Clay with Gravel	595					Collect BHGLAOC1907-
10-		Silty Clay with Gravel Mottled 10 YR 4/4 dark yellowish brown, 10 YR 7/4 very pale brown, and 10 YR 8/1 white silty clay with 25% gravel (0 25-10mm), subround to subangular, medium stiff, damp from 9-11', wet at 11'		CL			00	03 from 9 75' - 10 25' at 1400  Perched water at 11'
12-			592					End boring at 12'

Drilled By: ESN

Drill Method, DPT

Drilling Equipment: Strataprobe

HydroGeoLogic, Inc 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180

Hole Size 2"

Total Depth Drilled 12'



Project: Phase II SI

Client: AFCEE

Location: NAS FW JRB Northing: 6962977.164

Borehole ID: BHGLAOC1908

Date: 8/21/2001

Geologist: M. Johnston

**Ground Surface Elevation: 603 08** 

Easting: 2295949 596

		SUBSURFACE PROFILE			SAMPLE			
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	PID (ррт)	Remarks
1-		Silty Clay Grass, roots, 10 YR 4/4 dark yellowish brown silty clay, damp, medium soft, medium plastic	603 602	CL SP			0 0	Collect BHGLAOC1908- 01 from 0-1' at 830
2-		Sand 10 YR 7/4 very pale brown sand, fine to medium grained, moderate sorting  Clay		CL	100%		Drŷ	
3-		10 YR 2/2 very dark brown clay, hard, very dry	600					
4-		Silty Clay  10 YR 3/2 very dark grayish brown silty clay, 5% small gravel, subround to subangular, 1-2mm, calcium nodules		CL	100%		Dry	
5-		Silty Clay Same as above, with mottled 10 YR	598	CL	10078		Diy	Collect BHGLAOC1 02 from 4 5' - 5 5' at
6-		5/2 grayish brown clay, dry stiff 2" Limestone layer at bottom	597				Damp	
7		Clay 10 YR 5/6 yellowish brown mottled with 5/2 grayish brown clay with 10% small calcium nodules 1-2mm, subrounded, increasing moisture and plasticity with depth			80%		Moist	
9-				CL				
10-				<b>J.</b>				Collect BHGLAOC1908- 03 from 9 5' - 10.5' at 855
11-					80%		Wet	Water table at 11' bgs
12-		Weathered Limestone Weathered limestone with 5% fossils	591 591					
13-			:					

Drilled By. ESN

Drill Method DPT

Drilling Equipment Strataprobe

HydroGeoLogic, Inc. 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180 Hole Size 2"

Total Depth Drilled. 12.5'



Project: Phase II SI

Client: AFCEE

Location: NAS FW JRB

Northing: 6963052,561

Borehole ID: BHGLAOC1909

Date: 8/22/2001

Geologist: M Johnston

**Ground Surface Elevation:** 606.541

Easting: 2295993 924

		SUBSURFACE PROFILE			,	SAMP	LE	
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	PID (ppm)	Remarks
1- 2- 3- 4- 10-		Silty Sand and Gravel 10 YR 7/1 light gray silty sand with 50% gravel (1-50mm), subround to angular, dry  Silty Sand and Gravel Mottled 7 5 YR 5/6 strong brown with 10 YR 7/1 light gray silty sand with 50% gravel	604	GM	100%			Collect BHGLAOC1909- 02 from 4 5' - 5.5' at 1535 Fill material End boring at 6' bgs

Drilled By ESN

Drill Method DPT

Drilling Equipment: Strataprobe

HydroGeoLogic, Inc 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180

Hole Size. 2"

Total Depth Drilled: 6'



Project: Phase II SI

Client: AFCEE

Location: NAS FW JRB

Northing: 6963080 138

Borehole ID: BHGLAOC1910

Date: 8/22/2001

Geologist: M Johnston

**Ground Surface Elevation:** 612 536

Easting: 2295977 25

		SUBSURFACE PROFILE				SAMP	LE	
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	PID (ppm)	Remarks
1-2-	<i>\\</i>	Sandy Silty Clay 7.5 YR 3/4 dark brown sandy silty clay, poorly sorted with 20% gravel (1- 50mm), subangular, brittle, hard  Silty Sand with Gravel 10 YR 7/1 light gray silty sand with 50% gravel (1-50mm), fill	611	CL	75%	Dry		Collect BHGLAOC1910- 01 and MS/MSD from 0- 1' at 1545
3 4 5		อบ% gravei (1-อบmm), กแ		GM	20%	Dry		Collect BHGLAOC19 02 from 4 5 - 5 5' at
7-		Clay 10 YR 3/4 dark yellowish brown clay, soft, damp, asphalt at 8'  Silty Clay	606 605	CL	50%	Damp		
9 10 11		2" limestone gravel layer, angular 10-50mm, 10 YR 3/2 very dark grayish brown silty clay with gravel (15%) 1-50mm, subround to subangular, hard, dry  Silty Sand with Gravel 5 Y 5/1 gray silty sand with gravel (50%) angular, 1-40mm, poorly sorted	604	GM	100%	Dry		Collect BHGLAOC1910- 03 from 9 5' - 10 5' at 1605
12   13   14		Sandy Silt 10 YR 5/8 yellowish brown mottled with 10 YR 8/1 white sandy silt, dry, brittle, with some well rounded gravel, 10- 30mm, hard	601	SM				End boring at 12' bgs

Drilled By: ESN

Drill Method: DPT

Drilling Equipment Strataprobe

HydroGeoLogic, Inc. 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180

Hole Size: 2"

Total Depth Drilled 12'



Project: Phase il Si

Client: AFCEE

Location: NAS FW JRB Northing: 6963066 961

Borehole ID: BHGLAOC1911

Date: 12/05/2001 Geologist: A Karst

**Ground Surface Elevation:** 606 637

Easting: 2296003,735

		SUBSURFACE PROFILE				SAMP	LE	
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	PID (ppm)	Remarks
2-		Bìind Probe						
4-	- - - - -			GM				
5- 6-				GM				
7-								
9-		Silty Sand and Clav	598	,				Collect BHGLAOC1911- 03 and DUP04 from 9.5-
10-		Silty Sand and Clay 10YR 6/6 brownish yellow sandy silty clay, moderate plasticity, damp, medium stiff			100%	Damp		03 and DUP04 from 9.5- 10 5' at 1140
11-	11		596					End boring at 11' bgs

Drilled By ESN

Drill Method, DPT

Drilling Equipment' Strataprobe

HydroGeoLogic, Inc. 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180 Hole Size: 2"

Total Depth Drilled: 11'



Project: Phase II SI

Client: AFCEE

Location: NAS FW JRB Northing: 6963113 194

Borehole ID: BHGLAOC1912

Date: 12/05/2001

Geologist: A Karst

**Ground Surface Elevation:** 611 104

Easting: 2296037.657

		SUBSURFACE PROFILE				SAMP	LE	
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	РІБ (ррт)	Remarks
1 2 3 4 5 6 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7		Silty Clay with Gravel Top 1' gravel fill 10YR 2/2 very dark brown silty clay, soft, high plasticity, 8% sub-angular pebbles (1-4mm)  Blind Probe	607	CL	70%	Dry		Collect BHGLAOC1912- 02 and MS/MSD from 4.5-5 5' at 1125
10		Silty Clay with Gravel 10YR 6/6 brownish yellow silty clay with gravel, friable, low plasticity	602	CL	100%	Dry	0 0	Collect BHGLAOC1912- 03 from 9.5-10.5' at 1130
11-			600					End boring at 11' bgs

Drilled By ESN

Drill Method: DPT

Drilling Equipment Strataprobe

HydroGeoLogic, Inc. 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180

Hole Size. 2"

Total Depth Drilled 11'





Project: Phase II SI

Client: AFCEE

Location: NAS FW JRB

Northing: 6962755 909

Borehole ID: BHGLAOC1913

Date: 12/05/2001 🕝

Geologist: A. Karst

**Ground Surface Elevation:** 599 538

Easting: 2295995 226

		SUBSURFACE PROFILE		- <del></del>		SAMP	LE	
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	PID (ppm)	Remarks
1- 2- 3- 4- 5- 8-		Silty Clay with Gravel 10YR 2/2 very dark brown silty clay with 4-6mm sub-angular pebbles, high plasticity, slightly damp, medium stiff  Blind Probe	596 594	CL	100%	Damp	00	Collect BHGLAOC1913- 02 from 4 5-5 5' at 1215
10-		10YR 6/8 brownish yellow fine to coarse sand and gravel, loose, poorly sorted, moist, gravel is sub-angular to sub-rounded. Wet at 10' with well sorted fine sand from 10 to 11'		SP	100%	Moist Wet	0.0	Collect BHGLAOC1913- 03 from 9 5-10' at 1225 Wet at 10'
11-	•		589					End boring at 11' bgs

Drilled By. ESN

Drill Method DPT

Drilling Equipment. Strataprobe

HydroGeoLogic, Inc 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180

Hole Sizer 2"

Total Depth Drilled 11'



Project: Phase II SI

Client: AFCEE

Location: NAS FW JRB, Texas

Northing: 6963013 359

Borehole ID: WHGLTA050

Date: 2/9/2001

Geologist: M Johnston

**Ground Surface Elevation:** 599 19

Easting: 2296420.086

						_		
1		SUBSURFACE PROFILE				SAMP	LE	]
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	PID (ppm)	Remarks
1-	###	Silty Clay Top 2" grass and roots, 10YR 2/2 v dk brown silty clay, damp, medium stiff, roots	597	CL				
3		Silty Clay with Gravel At 2' 10YR 3/4 dk yellowish brown silty clay with 10% small gravel, medium stiff. Gravel is subround and 2-5 mm	595	CL	100%	Moist	0 0	
5-	<u>\</u>	Clayey Fine Sand Mottled 10YR 5/6 yellowish brown, 5/2 grayish brown, and 8/1 white poorly	594	sc				
6-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	·/·	sorted clayey fine sand with 5% small gravel abd calcium nodules (2-5mm) Moist in the bottom foot  Clayey Fine Sand 10YR 5/4 yellowish brown clayey fine sand, saturated, with 5% calcium nodules	592	SC	20%	Wet	00	
9							ļ	
10-								
12-								
13-								
14-							į	
15-	ļ							

Drilled By: Dixie Drilling

Drill Method: HSA

Drilling Equipment.

HydroGeoLogic, Inc. 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180

Hole Size:

Total Depth Drilled 7'

Sheet: 1 of 1



Project: Phase II SI

Client: AFCEE

Location: NAS FW JRB, Texas

Northing: 6962894 901

Borehole ID: WHGLTA051

Date: 2/9/2001

Geologist: M Johnston

**Ground Surface Elevation: 598 37** 

Easting: 2296247 122

		SUBSURFACE PROFILE				SAMP	LE	
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	PID (ppm)	Remarks
1-	##//	Silty Clay Grass top 2"; 10YR 3/2 v dk grayish brown silty clay, damp, medium stiff, with 5% roots  Clayey Sand 10YR 5/4 yellowish brown clayey fine-	596	CL	50%	Damp	0 0	Collect WHGLTA051-01 at 1310 from 0-6" No odor
3-	· ,,,,,,	coarse sand with 3% calcium nodules, damp, medium stiff		sc	30%	Батр	00	
5-		Saprolite Weathered limestone, moist, 10YR 8/1	594					Collect WHGLTA051-02
6-	10000000000000000000000000000000000000	mottled with 10YR 6/3 pale brown clay with gravel Gravel is 10%, subrounded-subangular, less than 2" Increasing water content - saturated from 5 5' to 7'	591	LS/SC	20%	Moist Wet	00	at 1315 from 4.5-5' No odor  Use the auger flights to drill through the saprolite
8-								from 5-7' End boring at 7' (bedrock)
9								Set well WHGLTA051 screen from 2-7', filter pack from 1.5-2', seal
10-								from 0.5-1 5', grout 0-0.5'
11-				:				
12								
13-								
14-								
15-								
16-								

Drilled By: Dixie Drilling

Drill Method: HSA

Drilling Equipment

HydroGeoLogic, Inc 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180

Hole Size.

Total Depth Drilled 7'

Sheet 1 of 1



Project: Phase II SI

Client: AFCEE

Location: NAS FW JRB, Texas

Northing: 6962769 451

Borehole ID: WHGLTA052

Date: 2/9/2001

Geologist: M Johnston

**Ground Surface Elevation:** 597.12

Easting: 2296098.067

		SUBSURFACE PROFILE				SAMP	LE	
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	PID (ppm)	Remarks
10epth 1 2 3 4 5 6 7 8 9 10 11 12 13 14 14 15 14 15 15 15 15 15 15 15 15 15 15 15 15 15	Symbo	Silty Clay Grass top 2", 10YR 3/2 v dk grayish brown silty clay, damp, medium stiff, with 10% roots  Clayey Sand 10YR 5/4 yellowish brown and 10YR 5/2 grayish brown clayey fine-coarse sand, damp  Saprolite Weathered limestone, 10YR 8/1 mottled with 10YR 6/3 pale brown clay with gravel Gravel is 15%, subrounded-subangular, wet from 5 5' to 7'	595 593	CL SC PS/SC	30%	Damp Moist Wet	ld) QIA 0	Collect WHGLTA052-02 at 1420 from 4.5-5' Water table at 5 5', no odor  Use the auger flights drill through the saprolite from 5-7' End boring at 7' (bedrock)  Set well WHGLTA052, screen from 2-7', filter pack from 1.5-2', seal from 0.5-1 5', grout 0-0 5'
15-								

Drilled By, Dixie Drilling

Drill Method, HSA

Drilling Equipment

HydroGeoLogic, Inc 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180

Hole Size:

Total Depth Drilled. 7'

Sheet: 1 of 1



Project: Excavation SI

Client: AFCEE

Location: NAS FW JRB

Northing: 6962827.984

Borehole ID: THGLAOC1901

Date: 8/14/2001

Geologist: M Johnston

**Ground Surface Elevation:** 599.157

Easting: 2296060 224

		SUBSURFACE PROFILE	-		SAMP	LE		
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	PID (ppm)	Remarks
1- 2- 3- 3- 4- 10-		Grass, roots in 10YR 4/3 brown silty clay with 30% gravel fill (0 25-50mm), subangular to sub round, hard dry  End of Trench	598	CL			00	The anomaly is a steel plate, 2'x2 5'x 25".  No odor, no stain, the plate was about 0.5' down Once removed used magnetic locator to see if anything else was there - no more anomalies  Dry 6" down - nothing else, Backfill

Drilled By, Sunbelt

Dnll Method: Excavation

Drilling Equipment Trackhoe

HydroGeoLogic, Inc. 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180

Hole Size 6'x5'x1'

Total Depth Drilled: 1'

Sheet 1 of 1



Project: Excavation SI

Client: AFCEE

Location: NAS FW JRB

Northing: 6962804 601

Borehole ID: THGLAOC1902

Date: 8/15/2001

Geologist: M Johnston

Ground Surface Elevation: 600.356

Easting: 2296060 224

$\vdash$	_	SUBSURFACE PROFILE	<u> </u>		SAMP	LE.		
<u> </u>	<u> </u>	COSCONIACE I NOTICE	<del>-</del>					
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	РІО (ррт)	Remarks
1-	X H H	Silty Clay Grass, roots, with 10 YR 4/3 brown silty clay, dry, hard, with 15% gravel, subround to subangular, 0 25mm- 35mm, calcium streaks	599	CL			00	2'x15' rusty scrap piece of metal and 20' of 2" pipe. No stain, odor, or PID detection - backfill after removing pipe and scrap metal
2-	HH H	Silty Clay Mottled 10 YR 7/3 very pale brown with 3/2 very dark grayish brown silty clay with 10% gravel fill, subangular to subround, 0 2mm - 40mm	507	CL			00	Trench location about 20 of A-13 - started there because magnetic locator detected stronger anomaly in that location
3-		End of Trench	597				00	
4-								
5-								
6-								
7-								
8-								
9-								

Drilled By Sunbelt

**Drill Method Excavation** 

Drilling Equipment Trackhoe

HydroGeoLogic, Inc 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180

Hole Size. 9'x15'x3'
Total Depth Drilled. 3'
Sheet 1 of 1



Project: Excavation SI

Client: AFCEE

Location: NAS FW JRB

Northing: 6962801 471

Borehole ID: THGLAOC1903

Date: 8/15/2001

Geologist: M Johnston

Ground Surface Elevation: 600.846

Easting: 2295927 572

		SUBSURFACE PROFILE				SAMP	LE	
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	PID (ррт)	Remarks
1-	H H	Silty Clay Grass and roots with 10 YR 5/2 grayish brown silty clay, hard, dry, with 25% gravel fill, subround to subangular, .3mm-45mm	-	CL				Only concrete, barbed wire, and a couple of pieces of wire cable.
:			599	ı				No odor, stains, or PID detections (all 0 0 ppm)
2-	H	Silty Clay 10 YR 3/2 very dark grayish brown and 5/3 brown silty clay with 10% gravel fill (1-30mm), subround to subangular	598	CL				Trench location is about 30' East of W801, where A-13 should be
3-		End of Trench						
5-								
6-								
7-								
8-								
9-			·		 			
10-								·

Drilled By: Sunbelt

Drill Method. Excavation

Drilling Equipment. Trackhoe

HydroGeoLogic, Inc 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180

Hole Size: 10'x7'x2.5'

Total Depth Drilled 2.5'

Sheet: 1 of 1



Project: Excavation SI

Client: AFCEE

Location: NAS FW JRB

Northing: 6963002 676

Borehole ID: THGLAOC1904

Date: 8/15/2001

Geologist: M Johnston

**Ground Surface Elevation:** 603 789

Easting: 2295961 437

$\vdash$								
		SUBSURFACE PROFILE				SAMP	LE	
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	РІD (ррт)	Remarks
3-	1 +	Silty Clay Grass, roots with 10 YR 7/2 light gray silty clay with 20% gravel (1mm-25mm), subround to subangular, dry, hard Silty Clay 10 YR 3/2 very dark grayish brown silty clay, 5% gravel (1mm-15mm), subround to subangular, dry, stiff/hard Damp at bottom	603 599	CL				Piece of scrap metal and wire cable (took pictures of both) . No odor, stains, or PID detections Backfill
5- 6- 8-		End of Trench		•				

Drilled By: Sunbelt

Drill Method, Excavation

Drilling Equipment, Trackhoe

HydroGeoLogic, Inc. 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180 Hole Size: 15'x9'x4 5'

Total Depth Drilled 4.5

Sheet: 1 of 1



Project: Excavation SI

Client: AFCEE

Location: NAS FW JRB

Northing: 6963048.419

Borehole ID: THGLAOC1905

Date: 8/15/2001

Geologist: M Johnston

**Ground Surface Elevation:** 604 2

Easting: 2296001 747

		SUBSURFACE PROFILE			,	SAMP	LE	
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	PID (ppm)	Remarks
1		Grass, roots in 10 YR 5/3 silty sandy clay, dry, hard, with 25% gravel (1mm-35mm), subangular to subrounded  Silty Sandy Clay 10 YR 7/2 light gray and 10 YR 5/3 brown silty sandy clay with construction debris (see remarks), dry, hard  Silty Clay 10 YR 3/2 very dark grayish brown silty clay, dry, hard  End of Trench	603 601 601	CL CL	4	~		In part of anomaly a-4 (NE lobe)  Found landfill debris (bottles, 3 crushed 55 gallon drums, PID = 0 0ppm in drums, no lids, rusty and empty, 2 5gallon buckets, concrete, wire, glass, nails, roofing tar).  Collected THGLAOC1905-02 from 3' at 1225  IDW sample from stockpile collected at 1235.

Drilled By Sunbeit

Drill Method: Excavation

Drilling Equipment Trackhoe

HydroGeoLogic, Inc. 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180

Hole Size: 13'x21'x3'

Total Depth Drilled: 3'

Sheet 1 of 1



Project No: AFC001-023E

Borehole ID: BHGLTA812

Project: NAS FTW Landfill RFI

Date: 6/2/98

Client: AFCEE

Geologist: Brad Nielsen

Location: LF-8

	_	SUBSURFACE PROFILE				SAMPL	E	
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	PID (ppm)	Remarks
1 1 2		Gravelly Silty Clay 7.5Y 6/6 reddish yellow gravelly silty clay, moderate plasticity, poorly sorted	611 87	GL	100%	dry		Asphalt and concrete debris
3-		No Recovery Bitnd probe Rock at 2' bgs Drilled through to 6'						
4					0%	dry		
5			607 87					
7-		Debris Asphalt and concrete debris with some clay and sand		GC	30%	dry		Landfill material
8-1		No Recovery	605 87 604 87		0%		,,	Offset boring 10' to north
10-		Gravelly Sandy Clay 7 5YR 3/2 dark brown gravelly sandy clay, moderate to low plasticity, firm to stiff, poorly sorted	602 87	GL		dry		Asphalt and concrete landfill material
12-		Silty Clay 7 5YR 2 5/1 black silty clay, high plasticity, stiff, well sorted	600 87	СН		damp		Out of landfill
13		Gravelly Clay 7.5YR 4/2 brown gravelly clay with silt, high plasticity, stiff, moderately to poorly sorted	598 87	мн		damp		
15 16		Gravelly Clay 7 5YR 5/3 brown gravelly clay with silt, _high plasticity, stiff, moderately to poorly		мн				

Drilled By. EDI

Drill Method: DPT

Drilling Equipment XD-2

HydroGeoLogic, Inc. 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180

Hole Size 4"

Total Depth Dnlled 23'

Sheet: 1 of 2



Project No: AFC001-023E

Borehole ID: BHGLTA812

Project: NAS FTW Landfill RFI

Date: 6/2/98

Client: AFCEE

Geologist: Brad Nielsen

Location: LF-8

		SUBSURFACE PROFILE		SAMPI	-E			
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	PID (ppm)	Remarks
17-			596 87			moist		
18	نىلىسىرد ئىلىسىرد	Silty Sandy Clay 7 5YR 5/4 yellowish brown silty sandy clay, high plasticity, stiff, moderately sorted	594 87	GM		damp		Some gravel from 17 to18'
19 -		Sandy Clay 10YR 5/4 yellowish brown sandy clay with some gravel, high plasticity, stiff, poorly sorted	592 87	мн				Increase in gravel
21 _	****	Silty Gravel  10YR 6/8 brownish yellow silty gravel with some clay, loose to firm, very poorly sorted		GM		wet		Water at 21 0' bgs
23			590 87			)		End of boring 23' bgs
25								
26								
27								
29-								
30								
31 -								

Drilled By: EDI

Drill Method: DPT

Drilling Equipment: XD-2

HydroGeoLogic, Inc. 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180

Hole Size 4"

Total Depth Drilled 23'

Sheet, 2 of 2



Project No: AFC001-023E

Borehole ID: BHGLTA814

Project: NAS FTW Landfill RFI

Date: 5/18/98

Client: AFCEE

Geologist: Brad Nielsen

Location: LF-8

		SUBSURFACE PROFILE				SAMPL	.E	
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	PID (ppm)	Remarks
1_		Silty Clay 10YR 2/1 black silty clay, stiff Silty Clay 10YR 4/2 dark grayish brown silty clay with 15 - 20% gravel and coarse sand (1/2" dia), stiff	600 85	CL		dry		•
3-		Silty Clay Mottled 10YR 4/1 dark gray and 10YR 4/4	597.35	-			~~~~~	
5-		dark yellowish brown silty clay with 15% gravel (up to 1/4" dia) Some gravel up to 1/2" dia near bottom of section	594 35	МН		damp		Collected VOC sample from 5 0 - 5 5' depth
8-	# # #	Silty Clay  Mottled 2 5Y 7/6 yellow and 6/1 gray silty clay with some coarse sand and gravel (up to 1/4" dia ), high plasticity. Increasing moisture with depth		мн		damp		Collected VOC sample from 9 0 - 9 5' depth
10-		Gravelly Clay  Mottled 2 5Y 7/6 yellow and 6/1 gray gravelly clay, high plasticity, firm. Bottom 4" of section is weathered limestone bedrock	591 35 590 35	GC		moist		Refusal at 11 0' bgs
13							;	
15								

Drilled By PSI

Drill Method, DPT

Drilling Equipment, XD-2

HydroGeoLogic, Inc. 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180

Hole Size 2"

Total Depth Drilled: 11'

Sheet, 1 of 1



Borehole ID: WHGLTA801

Project: NAS Fort Worth JRB

Date: 10/28/99

**Client: AFCEE** 

Geologist: Nielsen/ Webster

Location: LF-8/ SWMU 25

		SUBSURFACE PROFILE		<u> </u>		SAMPL	.E	
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	PID (ppm)	Remarks
1		Clayey Gravel Clayey gravel, poorly sorted, medium to low plasticity, stiff to loose, dry, 10YR 3/3 dark brown	598 83		80%			Gravelly and grassy surface 30-40% gravel
4- 5-	#	Silty Clay Silty Clay, moderate sorting, high plasticity, firm, damp, 10YR 3/2 very dark grayish brown			100%	Damp		Some small calcareous nodules  Collected WHGLTA801-02
6-	#		594 83		100%		<b></b>	from 5 - 7' at 1150
8		Clayey Gravel with Silt Clayey gravel with silt, poorly sorted, moderate to low plasticity, moist, 10YR 5/8 yellowish brown	592 83			Moist		
10	4.000	Silty Gravel Silty gravel, poorly sorted, low plasticity, hard, 10YR 6/5 brownish yellow	590 83		50%			Collected WHGLTA801-03 from 10 - 11' at 1210
11_		Gravelly Sandy Clay Gravelly sandy clay, very poorly sorted, moderate plasticity, firm to loose, saturated, 10YR 5/4 yellowish brown	589 83		50%	Sat	~~~~~	
13-		Clayey Sandy Gravel Clayey sandy gravel, very poorly sorted, moderate to low plasticity, firm to loose, saturated, 10YR 5/6 yellowish brown	587 83		75%	Sat		
15 16		Clay Shale Clay shale, very hard, dry, gley1 4/1 dark gray	587 33					Bedrock at 14 5' Total depth at 14 5 bgs DTW at 11' Well Installed

**Dniled By: TSS** 

Drill Method: HSA

**Drilling Equipment. B-59** 

HydroGeoLogic, Inc. 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180

Hole Size: 8"

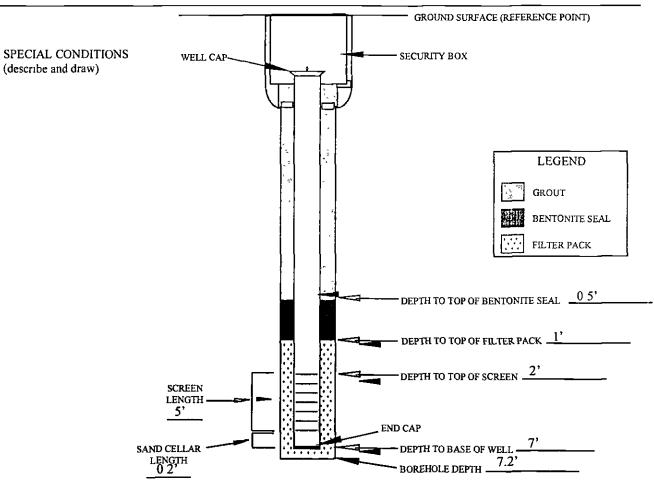
Total Depth Drilled 145'

Sheet: 1 of 1

MONITORING WELL CONSTRUCTION DETAILS

## WELL CONSTRUCTION DETAILS AND ABANDONMENT FORM

FIELD REPRESENTATIVE Margaret Johnston  DRILLING CONTRACTOR: Dixie Drilling	GRADIATION medium-coarse
DRILLING CONTRACTOR: Dixie Drilling	AMOUNT OF FILTER PACK USED
DRILLING TECHNIQUE DPT/HSA	TYPE OF BENTONITE 3/8" Envirocore Medium
AUGER SIZE AND TYPE: 5' split spoon	AMOUNT BENTONITE USED
BOREHOLE IDENTIFICATION WHGLTA050	TYPE OF CEMENT: Quickrete
BOREHOLE DIAMETER 5"	TYPE OF CEMENT · Quickrete AMOUNT CEMENT USED
WELL IDENTIFICATION WHGLTA050	GROUT MATERIALS USED
WELL CONSTRUCTION START DATE 2/7/2001	
WELL CONSTRUCTION COMPLETE DATE	DIMENSIONS OF SECURITY BOX-
SCREEN MATERIAL. PVC	TYPE OF WELL CAP Pressure cap
SCREEN DIAMETER 2"	
STRATUM-SCREENED INTERVAL (FT): 2-7'	
· / <del>_</del> _	COMMENTS
CASING MATERIAL PVC	
CASING DIAMETER 2"	



INSTALLED BY Chuck Delisi INSTALLATION OBSERVED BY: Margaret Johnston

DISCREPANCIES:

NOT TO SCALE

724 301

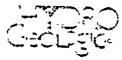
## HYDRO WELL CONSTRUCTION DETAILS AND ABANDONMENT FORM

AUGER SIZE AND TYPE. 5' split spoon  BOREHOLE IDENTIFICATION WHGLTA051  BOREHOLE DIAMETER 5"  WELL IDENTIFICATION WHGLTA051  WELL CONSTRUCTION START DATE 2/7/2001	AMOUNT OF FILTER PACK USED.  TYPE OF BENTONITE. 3/8" Envirocore Medium
CASING MATERIAL Schedule 40 PVC CASING DIAMETER. 2"	COMMENTS.
SPECIAL CONDITIONS (describe and draw)  SCREEN LENGTH 5'  SAND CELLAR LENGTH 0.2'	GROUND SURFACE (REFERENCE POINT)  SECURITY BOX  LEGEND  GROUT  BENTONITE SEAL  FILTER PACK  DEPTH TO TOP OF BENTONITE SEAL  DEPTH TO TOP OF FILTER PACK  LEGEND  GROUT  BENTONITE SEAL  2'  DEPTH TO TOP OF SCREEN  2'  END CAP  DEPTH TO BASE OF WELL  BOREHOLE DEPTH  NOT TO SCALE
INSTALLED BY: Chuck Delisi INSTAL	LLATION OBSERVED BY. Margaret Johnston
DISCREPANCIES	

# HYDRO WELL CONSTRUCTION DETAILS AND ABANDONMENT FORM

DRILLING CONTRACTOR Dixie Drilling  DRILLING TECHNIQUE DPT/HSA  AUGER SIZE AND TYPE: 5' split spoon  BOREHOLE IDENTIFICATION: WHGLTA052	
WELL CONSTRUCTION COMPLETE DATE  SCREEN MATERIAL. Schedule 40 PVC  SCREEN DIAMETER 2"  STRATUM-SCREENED INTERVAL (FT) 2-7'  CASING MATERIAL. Schedule 40 PVC  CASING DIAMETER 2"	TYPE OF END CAP- 4" point  COMMENTS
SPECIAL CONDITIONS (describe and draw)  SCREEN LENGTH 5'  SAND CELLAR LENGTH 0.2'	GROUND SURFACE (REFERENCE POINT)  SECURITY BOX  LEGEND  GROUT  BENTONITE SEAL  FILTER PACK  DEPTH TO TOP OF BENTONITE SEAL  DEPTH TO TOP OF FILTER PACK  END CAP  DEPTH TO TOP OF SCREEN  END CAP  DEPTH TO BASE OF WELL  7.0'  BOREHOLE DEPTH  7.2'  NOT TO SCALE
INSTALLED BY Chuck Delisi INSTA	LLATION OBSERVED BY: Margaret Johnston
DISCREPANCIES.	

MONITORING WELL DEVELOPMENT FORMS



## WELL DEVELOPMENT RECORD WELFREIGHER OF MANUAL PROSE

PROJECT NAME PAST TO ST PROJECT TO AFTE LC-CATION MORE 19 DATE INSTALLED STOTAL DEPTH (FTOC) 12 2 CASIC O DIAMETER	17/01		
METHODS OF DEVELOPMENT  Swarbing Bailing Pumping  Equipment decomfaminated prior to development  Describe	☐ Describe Scott	bbel 07 : 114 /c1	Fungad again
POUIPMENT NUMBERS  pri Meter EC Meter	Turbidity Meter	Thermometer	
CASING VOUCHS INFORMATION:	30 40 4	: [ .2 ] :0 [ .2 ]	10
"Law asing "aumer = (sautt) 104   0.09   9.15   1.22	<del>,</del>	<del></del>	
PURGING INFORMATION  Measured Well Depth (B) $C.22$ ft  Measured Water Let al Depth (C) $3.37$ ft  Length of Static Water Colume (D) $_{(B)}$ $_{(C)}$ Casing Water Volume (E) + $_{(A)}$ $_{(B)}$ $_{(D)}$ Total Purge Volume = $_{(2a)}$		1 1 1 1	MEAN SEA LEVEL

Flew	Onte	me	'Varer Level PTCC'	volume Removed gar)	DE Hc	Temperature F or C	Turbidity/ Sand (pem)
0.1 sallain	والمالعا	1365	4,37	3 and	Iskuta	Inp -	
	k/17/21	1315 1	×	4	749 272	1 1. 3	1173
		1320	\	45	724/326	1 14.30	33.7
	1	1325		5.0	7,21 331	14,43	17.5
	1	1331		5.5	2/5 339	14.45	11.7

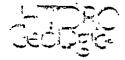
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Commenis Furbhed proged on 114/2011

cirally youch's

Cloudy, moder

AFCEE FORM WD 0



### WELL DEVELOPMENT RECORD

VELL PREZOMETER (DRUMEN TIPETS)

PROJECT NAME The >	TISI.	PRCII	ECT NO	<u> Ar</u>	11	<u>لر . , </u>	<u>(</u> :		•		_ =	ATE	<u>. ઝ</u>	1-	1/	<u> 200</u>	1
LOCATION ACCE	7	DAT	e instal	.ZD .	3	/=	71	$C_{\perp}$	<u> </u>								
TOTAL DEPTH (FTOC)	<u> 7.10                                    </u>	Casii	NG DIAM	ETER		_								_			
DTW = 4 30 METHODS OF DEVELOPY	IENT																
Swabbing Educement decomtaminated prior	🗖 ஹோ	ıg	🔀 Рилт	nog			escn:	×									
Equipment decomfaminated prior	to developmy	ะกเ	1			o 1	=s			NO	)						
Describe						_									_		
EQUIPMENT NUMBERS																	
pel Meter	EC Mer	er		_	Turc	idity '	More	·				7	hermome	er_			
CASING MOLUME INFORM	MATION																
ಭಿಷ್ಠ ಕಾರ್ಡಿಕ	, , )	5					<u> </u>		_						)	5 ()	_
5 C 5.00 - 11.70 - 12.981	1 104	17.173	1 316 1	יי	•	. 37		355	1	175		ı İ	1 3	i	,		1

#### PURGING INFORMATION

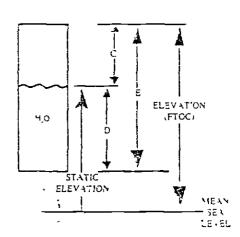
Measured Well Depin (B) 710

Measured Water Level Depth (C) 4.30

Length of Static Water Colume (D)  $\frac{7.10}{(B)} = \frac{430}{(C)} = \frac{2.80}{(C)}$  it

Crising 14 - - Volume (E) + 20 - (A) (C) = gal

Total Purge Volume = \_\_\_\_\_(gal)



Date Time (FOC)	Volume Removed 'gal)	сн	ĒC	Temperature For C	Turnicity/ Sund (pom)	Comments
2/17/01/1340 4.30 1	1 27	Sta	yn	1120 -	ļ	Smi bold of Miller of 32 go
2/17/61/1355 35 36430	129	1703	601.0	14.51	1002	1
2/17/01 14001		1699	601	14.47	60.2	
2/17/51:140> ;		693	602	1450	37 3	
2/17/01/410		1494	601	11446	· 39 C	,
2/17/4 1415	2	1691	604	14 60	265	
2/17/21/1420		691	599	14.39	12.3	
H17 101 1425 1		1690	599	14 32	8.67	1
12/17/01/1430 1	1	14.91	601	1452	! 197	
12/17/01/1435 1	ļ	6.91	1599	14 35	10.2	1

\* TOP OF PUMP ABOVE WHTER LEVEL

AFC BFORM WDU



### MONITOR WELL PURGING FORM

PROJECT PIGSE I SI						DATE 2/17/01					
LOCAT	ION. <u>AC</u>	C19	_		EXPL	OSIMETER B	OREHOLE R	EADING			
WELL ID: WHGLTA 052 WELL DEPTH 710						GE VOLUME ELLBORE VOI	LUMES):	(I	.)		
Time	Depth to Water (ft)	Flow Meter Reading	Volume Purged (K)	Temp (°C)	рН	Electrical Conductivity (mmho)	Turbidity N T U	Comments			
1440	*		30.5	1444	6.92	600	c 72				
1445				14 52	692	ω01	7.82				
1450			310	1456	เ็เร	602	7 22				
		-									
									_		
									_		
									$\dashv$		
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									$\dashv$		
									$\dashv$		
						_					
							_				
_											
		e well·	st reading		-		_				
Sam <del>ple</del> r_	14 16.14	47-		Obs	erver _	I BIH2		<del></del>			

FIELD SAMPLING FORMS



ATION.	NAS Fort W	orth JRB		PROJECT NAME DO 26 Site Investigation					
SHE. ACC	19			PROJECT NAME	AFC-001-26CC				
			SAMPLE IN	FORMATION					
SAMPLE ID	BHGLAOC	1901-01		DATE 5/10	2/00	TIME 15/0			
MATRIX TYP	PE SO			ENTER SAMPLI	E NUMBERS F	OR OC SAMPLE			
SAMPLING M	IETHOD Sol	Espain/ Br	1000	ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE					
LOT CONTRO	OL#	7 50	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	MATRIX SPIK	E (MS)				
ŀ		- Trip Blank # - Cooler	#)	MATRIX SPIKI	E DUP (SD)				
CHAIN-OF-CU	USTODY #:	·			D)	•			
				AMBIENT BLA	NK (AB)				
SAMPLE BEG C	OPETH (FT)	/			BLANK (EB)				
SAMPLE END D	PETH (FT) 3 '	,							
1	OMPOSITE ( )			IRIP BLANK (	TB) <b>TIS 05</b> /6	<del></del>			
CONTAINER	R PRI	SERVATIVE/	A	NALYTICAL	1	ANALYSIS	<del></del>		
SIZE/TYPE	# PR		METHOD						
4 oz Jar	<del>                                     </del>	Cool to 4C	SW	6010B/SW7471A		Metals + Mercury			
5g Encore 4 oz Jar	<del></del>	Cool to 4C Cool to 4C		SW8260B SW8270C		VOCs SVOCs			
·									
		NO	TABLE OB	SERVATIONS	·				
PID REA			AMPLE CHAR	ACTERISTICS		MISCELLAN	EOUS		
1st C	1.	OLOR							
2nd 7		DOR THER							
-11	<del></del>		asolved Overs	in (ma/I	\ Francis Cara		(umbas/am)		
		e(C) Di				<u>-</u>	_(untinos/citi)		
Iron	_(mg/L) Oxida	tion/Reduction Potent			<u></u>	(NTU)			
				FORMATION					
WEATHER SU	un/clearX_	OVERCAST/RAI	IN	WIND DIRECTION	FRom W AMB	IENT TEMPERATU	re <u>404</u>		
SHIPMENT VIA	FEDEXx_	HAND DELIVER _	CO	URIEROTI	HER				
SHIPPED TO S	STL - Chicago								
COMMENTS									
SAMPLER	5.W15	کوئیر		OBSERVER _	Damil	sough			
7	MATRIX TYPE CO	DDES		T = -	SAMPLING MET	HOD CODES			
DC=DRILL CUTT	rings	SL=SLUDGE		B=BAILER		G = GRAB			
WG=GROUND W	'ATER	SO=SOIL		BP≠BLADDER PUM	Į <b>P</b>	HA≃HAND AUG	ER		
LH=HAZARDOU	S LIQU <b>ID WAST</b> E	GS≔SOIL GAS		BR=BRASS RING		H=HOLLOW ST	EM AUGER		
SH≈HAZRDOUS	SOLID WASTE	WS=SURFACE WA	TER	CS=COMPOSITE SA	MPLE	HP=HYDRO PU	NCH		
SE=SEDIMENT		SW = SWAB/WIPE		C=CONTINUOUS F	LIGHT AUGER	SS=SPLIT SPOO	N		
				DT=DRIVEN TUBE		SP=SUBMERSIB	LE PUMP		



ì

LOCATION NAS Fort W	orth JRB	PF	ROJECT NAME	DO 26 S	DO 26 Site Investigation			
SITE. <u>40C/9</u>		_ PF	ROJECT NAME	AFC-00	01-26CC			
	SAN	MPLE INF	ORMATION	V				
SAMPLE ID BHGLAOO	C1901-02	]	DATE 5	112/00	TIME: 15/5			
MATRIX TYPE SO			ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE					
SAMPLING METHOD- SPL	IT SPOON BUY							
LOT CONTROL #			MATRIX S	SPIKE (MS)				
(Ambient Blank # - Equipment Blank #	f - Trip Blank # - Cooler #)		MATRIX S	SPIKE DUP (SD	))			
CHAIN-OF-CUSTODY #			FIELD DL	P (FD)				
	1			BLANK (AB)				
SAMPLE BEG DPETH (FT) 3	1				B) EB 05/200			
SAMPLE END DPETH (FT) 💪 🐪					05/200			
GRAB COMPOSITE ( )	1		INIT BLA	W (10) <b>7</b> 65	03/200			
,	<del></del>		AT SZELO A L	_	ANITIVOTO			
<del></del>	ESERVATIVE/ EPARATION		ALYTICAL 1ETHOD	]	ANALYSIS			
<del></del>					Metals + Mercury			
5g Encore 3	Cool to 4C		W8260B		VOCs			
4 oz Jar 1	Cool to 4C	S	W8270C		SVOCs			
			ERVATION	S 				
PID READINGS		PLE CHARAC	RACTERISTICS MISCELLANEOUS					
- <del>\</del> \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	OLOR	<u> </u>						
<del></del>	DOR THER							
<del>_</del>	<del>_</del>	1.0		// C -	C. C. 1			
					fic Conductivity(umhos/			
Iron (mg/L) Oxida			<del></del>		(NTU)			
			ORMATIO		. 16			
WEATHER SUN/CLEAR X	OVERCAST/RAIN _		WIND DIRECT	ION FROM	Wambient temperature 90%			
SHIPMENT VIA FEDEXx_	HAND DELIVER	COUR	IER	OTHER				
SHIPPED TO STL - Chicago								
COMMENTS								
SAMPLER J. WILSON	<u> </u>	0	BSERVER _	5. DAM	BAUBH			
MATRIX TYPE CO	DDES		<del></del>	SAMPLE	NG METHOD CODES			
DC=DRILL CUTTINGS	SL=SLUDGE	В	=BAILER		G = GRAB			
WG=GROUND WATER	SO=SOIL	В	P=BLADDER	PUMP	HA=HAND AUGER			
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS	В	R=BRASS RIN	iG	H=HOLLOW STEM AUGE			
SH=HAZRDOUS SOLID WASTE	WS=SURFACE WATER	ı c	S=COMPOSIT	E SAMPLE	HP=HYDRO PUNCH			
SE=SEDIMENT	SW=SWAB/WIPE	c	=CONTINUOU	US FLIGHT AU	IGER SS=SPLIT SPOON			
		D	T=DRIVEN T	UBE	SP=SUBMERSIBLE PUMP			
		AFCEE FOR	M SR.11					



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LOCATION NAS Ft Worth JRB PROJECT NAME  SITE PROJECT NAME  PROJECT NAME										
	S	AMPLE INFORMATION								
SAMPLE ID	ALT ART IN	DATE	TIME 3							
MATRIX TYPE S	0	ENTER SAMPLE A	HIMBERS FOR OC SAMPLES!							
SAMPLING METHOD. SAMPLE SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE										
LOT CONTROL #.	<u> </u>	MATRIX SPIKE (A	IS)							
	ment Blank # - Trip Blank # - Cooler	#) MATRIX SPIKE D	LP (SD)							
CHAIN-OF-CUSTO	DV#	FIELD DUP (FD)	<del></del>							
		AMBIENT BLANK								
SAMPLE BEG DPETH	(FT) ラ		NK (EB):							
SAMPLE END DPETH	•									
GRAB ( ) COMP	•	TRIP BLANK (TB)	<u>-170</u> 5							
CONTAINER	PRESERVATIVE/	ANALYTICAL	ANALYSIS							
SIZE/TYPE #	PREPARATION	METHOD	THAT ISIS							
-902 TAK +			MOTAL'S PARTICIPY							
50 0x000 1	Cool to 4C	<u> 508360B</u>	SVIXS							
PID READINGS	COLOR ODOR	MPLE CHARACTERISTICS	MISCELLANEOUS							
	OTHER		55-6							
		al(mv) Turbidity	Specific Conductivity(umhos/cm)							
(mg/.		ENERAL INFORMATION	(N10)							
	EAROVERCAST/RAI	WIND DIRECTION	AMBIENT TEMPERATURE							
		COURIER OTHER								
HIPPED TO STL -										
OMMENTS		-								
AMPLER	<u> </u>	OBSERVER								
	X TYPE CODES	SAN	MPLING METHOD CODES							
C=DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G=GRAB							
G=GROUND WATER		BP=BLADDER PUMP	HA=HAND AUGER							
	ID WASTE GS=SOIL GAS	BR=BRASS RING	H=HOLLOW STEM AUGER							
I=HAZRDOUS SOLID	WASTE WS=SURFACE WAT		111211010101							
=SEDIMENT	SW=SWAB/WIPE	C=CONTINUOUS FLIGH	1							
		DT-DDIVEN TIBE	CD CUDACEDOIDE DIACD							

AFCEE FORM SR 11



CATION	NAS Fort Wo	orth JRB	ļ	PROJECT NAME	DO 26 Site inv	esaganon			
SIFE: AOC	19			PROJECT NAME	AFC-001-26C0	3			
		S	AMPLE IN	FORMATION					
SAMPLE ID	BHGLAOC	1901-03		DATE: 5/18	400	TIME: 1545			
MATRIX TYPE:	SO			ENTER SAMPL	E NUMBERS	FOR QC SAMPLES/			
SAMPLING ME	THOD. SALA	TSPOON/BUX	925	BLANKS ASSOCIATED WITH THIS SAMPLE.					
LOT CONTROL	#			MATRIX SPIK	E (MS)	<del></del> -			
(Ambient Blank # - E	quipment Biank #	- Trip Blank # - Cooler #	6	MATRIX SPIK	E DUP (SD)				
CHAIN-OF-CUS	TODY #		_	FIELD DUP (F	D)	<del>-</del>			
				AMBIENT BLA	ANK (AB)				
SAMPLE BEG DPE	ETH (FT) 9 1					73.05/200			
SAMPLE END DPE	TH (FT) ]/				TB) 773057				
GRAB (X) CON	MPOSITE ( )				12/ 12001				
CONTAINER	PRE	SERVATIVE/		NALYTICAL		ANALYSIS			
SIZE/TYPE	<del></del> -	EPARATION		METHOD					
4 oz Jar	1 (	Cool to 4C	SW	5010B/SW7471A		Metals + Mercury			
5g Encore	3 C	Cool to 4C		SW8260B		VOCs			
4 oz Jar	1 C	Cool to 4C		SW8270C		SVOCs			
<u> </u>	<u> </u>	CON	TABLE OB	SERVATIONS		<del></del>			
PID READI	NGS	SAI	MPLE CHAR	ACTERISTICS		MISCELLANEOUS			
1st ODDAY	~	DLOR							
2nd '		OOR							
<b>_</b>	01	THER							
pH	Temperature	(C) Diss	solved Oxyge	n(mg/L	.) Specific Cor	nductivity(umhos/cm)			
Iron(1	mg/L) Oxidat	ion/Reduction Potentia	al	(mv) Turbidity	<u>/</u>	_ (NTU)			
		GE	NERAL IN	FORMATION					
( WEATHER SUN	CLEAR X	OVERCAST/RAIN	١	WIND DIRECTION	PROM W AM	BIENT TEMPERATURE 90%			
1		— HAND DELIVER				<del>* * *</del>			
SHIPPED TO STI									
COMMENTS									
SAMPLER J. C	WILLOW			OBSERVER E	DAM AM				
	TRIX TYPE CO				SAMPLING ME				
DC≈DRILL CUTTIN		SL=SLUDGE		  B=BAILER	5 Sa 10 1760	G=GRAB			
WG=GROUND WAT		SO=SOIL		BP=BLADDER PUN	1P	HA=HAND AUGER			
LH=HAZARDOU\$ L				BR=BRASS RING		H=HOLLOW STEM AUGER			
SH=HAZRDOUS SO	-	WS=SURFACE WAT	ER	CS=COMPOSITE SA	AMPLE	HP=HYDRO PUNCH			
SE=SEDIMENT		SW=SWAB/WIPE		C≈CONTINUOUS F	LIGHT AUGER	SS=SPLIT SPOON			
				DT = DRIVEN TUBE SP = SUBMERSIBLE P					



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	NAS Ft Worth JRB		PROJECT NAME 1 2 / / / / / / / / / / / / / / / / / /						
SI	<u> </u>		PROJECT NAME $J^{1}_{f,j}$	C201 2000					
	SAMPLE INFORMATION								
SAMPLE ID t	Alberta Mone	- I	DATE: 5/20/	<u>к</u> тіме: <u>С</u> S: 3 (					
MATRIX TYPE:	SO		ENTER SAMPLE NI	UMBERS FOR QC SAMPLES/					
SAMPLING METH	IODE, Alt Specife	¿ ¿ ç ç '		TED WITH THIS SAMPLE					
LOT CONTROL #.			MATRIX SPIKE (MS	S)					
(Ambient Blank # - Equi	pment Blank # - Trip Blank # - Cooler	#)	MATRIX SPIKE DU	P (SD)					
CHAIN-OF-CUSTO	ODY#		FIELD DUP (FD)	-					
			AMBIENT BLANK (						
SAMPLE BEG DPETE	H (FT)			<del></del>					
SAMPLE END DPETH				K (EB). 1 1 1 2 2 1					
			TRIP BLANK (TB)	112622600					
GRAB COMF	POSITE ( )								
CONTAINER	PRESERVATIVE/	A	NALYTICAL	ANALYSIS					
SIZE/TYPE #	PREPARATION	-	METHOD						
	Cool to 4C			Name of the Party					
SAFECTE 1	Cool to 4C	500	8960B	VCS					
	Cool in 4C								
DID DEADING			SERVATIONS	1905					
PID READING	<del></del>	AMPLE CHAR	ARACTERISTICS MISCELLANEOUS						
ist ( ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	ODOR		<del>_</del>						
	OTHER								
pH	Temperature (C) Dis	ssolved Oxyge	n(mg/L)	Specific Conductivity (umhos/cm)					
fron(mg	/L) Oxidation/Reduction Potent	ıal	(mv) Turbidity	(NTU)					
	G	ENERAL IN	FORMATION						
VEATHER SUN/CI	LEAR OVERCAST/RAI	IN 📐	WIND DIRECTION V	AMBIENT TEMPERATURE A CO					
	DEXt HAND DELIVER _								
HIPPED TO STL	<u> </u>								
OMMENTS									
AMPLER ;	1 ( 1)00	5 %	OBSERVER	1 6 4					
MATE	RIX TYPE CODES		SAN	IPLING METHOD CODES					
C=DRILL CUTTINGS	S SL=SLUDGE		B=BAILER	G = GRAB					
'G=GROUND WATE	R SO=SOIL		BP=BLADDER PUMP	HA≈HAND AUGER					
H=HAZARDOUS LIQ	UID WASTE GS=SOIL GAS		BR=BRASS RING	H=HOLLOW STEM AUGER					
H=HAZRDOLS SOLI	D WASTE WS=SURFACE WA	TER	CS=COMPOSITE SAMPL	E HP=HYDRO PUNCH					
=SEDIMENT	SW=SWAB/WIPE		C=CONTINUOUS FLIGH						
			DT - DDIVEN TIRE	CD - CL DMED CIDLE DI MD					



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OCATION.	NAS Ft Worth JRB PROJECT NAME							
ITE		•	F	PROJECT NAME 1.4.3				
SAMPLE INFORMATION								
SAMPLE ID	<u>;</u> -	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	-	DATE:	TI	ME 6 ) 75		
IATRIX TYPE				ENTER SAMPLE N	UMBERS FOI	R QC SAMPLES/		
AMPLING M	ETH	OD.		BLANKS ASSOCIA	TED WITH T	HIS SAMPLE.		
OT CONTRO				MATRIX SPIKE (M	S)	<u>-</u>		
.mbieni Blank # -	Equip	oment Blank # - Trip Blank # - Cooler	#)	MATRIX SPIKE DU	(SD)			
HAIN-OF-CU	STO	DY #		FIELD DUP (FD)	-			
				AMBIENT BLANK	(AB)	<del></del>		
AMPLE BEG DE	PETH	(FT) - { }		EQUIPMENT BLAN TRIP BLANK (TB)	NK (EB)			
AMPLE END DE	ETH	(FT) { (		TRIP BLANK (TB)				
1AB () CO	OMP	OSITE()				-		
CONTAINER	_	PRESERVATIVE/	A	NALYTICAL		ANALYSIS		
SIZE/TYPE	#	PREPARATION		METHOD				
Ci bu Ubu	1	Cool to 4C	-22	25 15 12 m d				
S Draw		Cool to 4C Cool to 4C		SWEFEOR VOCS				
	(							
		NC	TABLE OB	SERVATIONS		_		
PID REAL			AMPLE CHARA	MISCELLANEOUS MISCELLANEOUS				
00	17	ODOR						
		OTHER						
H_		Temperature(C) Do	ssolved Oxyge	n(mg/L)	Specific Condu	ctivity (umhos/cm)		
		L) Oxidation/Reduction Potent						
				FORMATION				
ATHER: SU	'N/CL	EAROVERCAST/RA	ni	WIND DIRECTION	AMBIE	NT TEMPERATURE		
PMENT VIA.	FEI	DEXx HAND DELIVER	cou	RIEROTHER	<b>.</b>			
סד משקיי	<u>TL -</u>	Chicago						
IMENTS				·				
JPLER				OBSERVER	<u>-</u>			
	LATR	IX TYPE CODES		SA	MPLING METH	OD CODES		
= DRILL CUTTINGS SL = SLUDGE			B = BAILER $G = GRAB$					
	= GROUND WATER SO = SOIL					HA=HAND AUGER		
	-	UID WASTE GS=SOIL GAS	_	BR = BRASS RING		H = HOLLOW STEM AUGER		
	SOLIE	) WASTE WS=SURFACE WA	TER	CS = COMPOSITE SAMP		HP=HYDRO PUNCH		
SEDIMENT		SW=SWAB/WIPE		C=CONTINUOUS FLIG	HT AUGER	SS=SPLIT SPOON		
<del></del> :				DT = DRIVEN TUBE		SP = SUBMERSIBLE PUMP		
			AFCEE FO	ORM SR 11				



SE=SEDIMENT

## FIELD SAMPLING REPORT

`ATION:		NAS Fort Worth JRB		PROJECT NAME	DO 26 Site Investigation		
SILE: AOC	19		_	PROJECT NAME	AFC-001-26CC		
			AMPLE IN	FORMATION			
SAMPLE ID	]	BHGLAOC1902-01	,	DATE S/IS	TIME CESTO		
MATRIX TYPI	Ξ :	SO		ENTED SAMDI	E NUMBERS FOR QC SAMPLES/		
SAMPLING M	ETH	IOD SPLASACNITA	سورمه دمخ		CIATED WITH THIS SAMPLE		
LOT CONTRO	L #·	J CAT STORY ON		MATRIX SPIKI	E (MS)		
(Ambient Blank # -	Equip	pment Blank # - Trip Blank # - Cooler	#)	MATRIX SPIKI	EDUP (SD)		
CHAIN-OF-CI	ISTO	DDY #		FIELD DUP (FI	0)		
					NK (AB)		
SAMPLE BEG D	PETH	H(FT) OFF			LANK (EB) 673 CS7500		
SAMPLE END DE	PETH	1(FT) 3 FT			IB) <u>TB 05/57</u> 0		
GRAB 💢 CO	OMP	POSITE ( )		IRIF BLANK (	7 <u>5675</u> 0		
CONTAINER	_	PRESERVATIVE/		ANALYTICAL	ANALYSIS		
SIZE/TYPE	#	· · · · · · · · · · · · · · · · · · ·	•	METHOD	THAT TOPS		
4 oz Jar	1	Cool to 4C	SW	6010B/SW7471A	Metals + Mercury		
5g Encore	3			SW8260B	VOCs		
4 oz Jar	l	Cool to 4C		SW8270C	SVOCs		
		NO'	TABLE OF	SERVATIONS			
PID REAL	DING			ARACTERISTICS MISCELLANEOUS			
1st O.O PP		COLOR		<u></u>			
2nd		ODOR					
		OTHER					
pH	_	Temperature(C) Dis	ssolved Oxyg	en(mg/L	Specific Conductivity(umhos/cm)		
Iron	_(mg	/L) Oxidation/Reduction Potenti	al	(mv) Turbidity	(NTU)		
		Gł	ENERAL II	NFORMATION			
WEATHER SU	N/CI	LEAR $\chi$ OVERCAST/RAI	N.	WIND DIRECTION	75% AMBIENT TEMPERATURE 75%		
		DEXx HAND DELIVER _					
SHIPPED TO S		<del></del>					
COMMENTS							
	- 4	UILSON)		OBSERVER ES	JAMBANGH		
<b></b>			<u>_</u>				
MATRIX TYPE CODES  DC=DRILL CUTTINGS   SL=SLUDGE				SAMPLING METHOD CODES  B=BAILER G=GRAB			
WG=GROUND W		'		BP=BLADDER PUM			
1	<del>-</del> -	UID WASTE GS=SOIL GAS		BR=BRASS RING	H=HOLLOW STEM AUGER		
SH=HAZRDOUS S			ΓER	CS=COMPOSITE SA			

DT=DRIVEN TUBE

SW=SWAB/WIPE

C=CONTINUOUS FLIGHT AUGER SS=SPLIT SPOON

SP=SUBMERSIBLE PUMP



# BEST AVAILABLE COPY

LOCATION: NAS Fort Worth JRB				PROJECT NAME DO 26 Site Investigation			
SITE 40C19				PROJECT NAME AFC-001-26CC			
			SAMPLE I	NFORMATION			
SAMPLE ID		BHGLAOC1902-02		DATE <u>5/15</u>	100 TIME 0855		
MATRIX TYP		SO		ENTER SAMPLE	NUMBERS FOR QC SAMPLES/		
SAMPLING M	IETH	IOD. SPLIT SPOON /ON	CNCE		IATED WITH THIS SAMPLE		
LOT CONTRO	)L #:			MATRIX SPIKE	(MS)		
(A nbient Blank #	- Equi	pment Blank # - Trip Blank # - Cooler	#)	MATRIX SPIKE	DUP (\$D)		
CHAIN-OF-CU	JSTO	DDY #		FIELD DUP (FD	)		
				AMBIENT BLA	NK (AB)		
SAMPLE BEG D	PETI	H(FT) 3		EQUIPMENT BI	ANK (EB) 573 (557.50°)		
SAMPLE END D	PETH	I (FT) 💪			B) 773 (27 50°)		
GRAB ∕X C	OMF	POSITE ( )					
CONTAINER	₹	PRESERVATIVE/		ANALYTICAL	ANALYSIS		
SIZE/TYPE	#_	PREPARATION		METHOD			
4 oz Jar	1	Cool to 4C	S\	V6010B/SW7471A	Metals + Mercury		
5g Encore	3	Cool to 4C		SW8260B	VOCs		
4 oz Jar	1	Cool to 4C		SW8270C	SV OCs		
		NO	TABLE O	BSERVATIONS			
PID REA	DING	SS SA	AMPLE CHA	HARACTERISTICS MISCELLANEOUS			
1st O,OPPI	<u> አገ</u>	COLOR					
2nd		ODOR					
		OTHER	<del></del>		<del></del>		
pH		<del></del>			Specific Conductivity(umhos/cm)		
Iron	_(mg	/L) Oxidation/Reduction Potent	ıal	(niv) Turbidity	(NTU)		
		G	ENERAL I	NFORMATION			
WEATHER ST	JN/CI	LEAR X OVERCAST/RAI	N	WIND DIRECTION	759 AMBIENT TEMPERATURE 759		
SHIPMENT VIA	FE	DEXx HAND DELIVER _	co	OURIEROTH	ER		
SHIPPED TOS	TL.	- Chicago					
COMMENTS							
AMPLER	J.	60165cm)		OBSERVER	DAMSAULH		
	MATE	RIX TYPE CODES	<del>-</del>	T	SAMPLING METHOD CODES		
C=DRILL CUT	FINGS	S SL=SLUDGE		B=BAILER	G=GRAB		
G=GROUND W	ATE	R SO=SOIL		BP=BLADDER PUM	P HA=HAND AUGER		
H=HAZARDOU	s liq	UID WASTE GS=SOIL GAS		BR=BRASS RING	H=HOLLOW STEM AUGER		
A = HAZRDOUS	SOLI	D WASTE WS≔\$URFACE WA	TER	CS = COMPOSITE SA	MPLE HP=HYDRO PUNCH		
E=SEDIMENT		SW = SWAB/WIPE		C=CONTINUOUS FL	IGHT AUGER SS=SPLIT SPOON		
				DT = DRIVEN TUBE	SP=SUBMERSIBLE PUMP		



LOCATION-	NAS Fort Wo	rth JRB	i	PROJECT NAME	DO 26 Site Inves	stigation
SITE. ACC	19			PROJECT NAME	AFC-001-26CC	
		SA	MPLE IN	FORMATION		
SAMPLE ID	BHGLAOC	1903-01		DATE <u>5/15</u>	/co	TIME. 0935
MATRIX TYPE	SO			ENTER SAMPL	E NUMBERS FO	OR QC SAMPLES/
SAMPLING ME	THOD. SLIT	spent mx	eco	BLANKS ASSO	CIATED WITH	THIS SAMPLE
LOT CONTROL				MATRIX SPIK	E (MS)	
(Ambient Blank # - E	Equipment Blank #	- Trip Blank # - Cocler #)		MATRIX SPIK	E DUP (SD)	A BURNET STATE OF
CHAIN-OF-CUS	STODY #		_	FIELD DUP (F	DIVOG	<b>_</b>
<del></del>				AMBIENT BLA	ANK (AB)	
SAMPLE BEG DP	ЕТН (FT) <i>(С)</i>		-	EQUIPMENT I	BLANK (EB)	3 CS7500
SAMPLE END DPI	ETH (FT) 3			TRIP BLANK (	TB) <u>773</u> ごごろ	<b>7</b> ***
GRAB(X) CO	MPOSITE ( )					·
CONTAINER	PRE	SERVATIVE/	A	NALYTICAL		ANALYSIS
SIZE/TYPE	# PRE	PARATION		METHOD		
4 oz Jar	<del></del>	Cool to 4C	SW			Metals + Mercury
5g Encore	<del></del>	Cool to 4C		SW8260B		VQCs SVOCs
4 oz Jar	1 ] (	Cool to 4C		SW8270C	1	3,000
		NOT	ABLE OB	SERVATIONS		,
PID READ			IPLE CHAR	ACTERISTICS		MISCELLANEOUS
151 COPF		DLOR	<del></del>			
2nd		OOR THER		<del></del>		
рН		<del></del>	olved Oxyge	n (mg/I	) Specific Cond	luctivity(umhos/cm)
ļ		ion/Reduction Potential				
	(Ilig/L) Oxidat					(1410)
GENERAL INFORMATION  WEATHER SUN/CLEAR OVERCAST/RAIN WIND DIRECTION 53 AMBIENT TEMPERATURE 757  SHIPMENT VIA FEDEX x HAND DELIVER COURIER OTHER						
SHIPPED TO ST	L - Chicago					
COMMENTS						
SAMPLER	cultur			OBSERVER	JAMBA	Most
MATRIX TYPE CODES					SAMPLING MET	HOD CODES
DC=DRILL CUTTINGS SL=SLUDGE				B=BAILER		G = GRAB
WG≈GROUND WATER SO=SOIL				BP=BLADDER PUMP HA=HAND AUGER		
LH=HAZARDOUS	-		_	BR=BRASS RING		H≈HOLLOW STEM AUGER
SH=HAZRDOUS SC	DLID WASTE		:R	CS = COMPOSITE SA		HP=HYDRO PUNCH
SE=SEDIMENT		SW=SWAB/WIPE		C=CONTINUOUS F		
				DT=DRIVEN TUBE		SP=SUBMERSIBLE PUMP

### 724 317 HYDRO Geologic

ATION. NAS Ft Worth	JRB	PROJECT NAME DO	26/29 RFI/SI
SITE ACC-19		PROJECT NAME AF	C001-26CC/29BBBA
	SAMPLE	INFORMATION	
SAMPLE ID DUP06		DATE. 5/15/00	TIME. 0835 (10490)
MATRIX TYPE. SO		ENTER SAMPLE NI	JMBERS FOR QC SAMPLES/
SAMPLING METHOD SOL	or con large		ED WITH THIS SAMPLE
OT CONTROL #:	1 STEEN BINGIA	M.ATRIX SPIKE (MS	)
Ambient Blank # - Equipment Blank # -	Trip Blank # - Cooler #)	MATRIX SPIKE DUI	P (SD)
CHAIN-OF-CUSTODY #		FIELD DCP (FD)	
CHAIN-OF-COSTODT#	- <u>-</u>	AMBIENT BLANK (A	
SAMPLE BEG DPETH (FT)			-
SAMPLE END DPETH (FT) 3		·	K (EB) <u>(73 05/50</u> 0
GRAB (X) COMPOSITE ( )		TRIP BLANK (TB)	7 <u>/3 05 75 9</u> 0
SKID X COMPOSITE ( )			
	ERVATIVE/	ANALYTICAL	ANALYSIS
	PARATION OOL to 4C	METHOD SW6010B/SW7471A	Metals + Mercury
	ool to 4C	SW8270C	SVOCs
So enure 3	celto 4C	5108260B	VCCS
<i>g</i>	NOTABLE	OBSERVATIONS	
PID READINGS	SAMPLE CI	HARACTERISTICS	MISCELLANEOUS
	LOR	<u>-</u>	
	OOR		
		xygen (mg/L) S	Specific Conductivity(umhos/cm)
Iron(mg/L) Oxidat			·
iton(ing/L) Oxidati		L INFORMATION	
WEATHER SUN/CLEAR X	OVERCAST/RAIN	wind direction 4.3	S AMBIENT TEMPERATURE 754
SHIPPED TO STL - Chicago	= <del>-</del>	<u></u> ,	<del></del>
		•	
COMMENTS			
SAMPLER J. CUILSON	<u></u>	OBSERVER (C)	AMISTU BY
MATRIX TYPE CO			IPLING METHOD CODES
DC = DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G=GRAB
WG=GROUND WATER	SO = SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE		BR = BRASS RING CS = COMPOSITE SAMPL	H=HOLLOW STEM AUGER  HP=HYDRO PUNCH
SH = HAZRDOUS SOLID WASTE	WS=SURFACE WATER	C=CONTINUOUS FLIGH	
SE = SEDIMENT	SW=SWAB/WIPE	DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

### HYDRO Geologic

'ATION	NAS Fort Wo	rth JRB	I	PROJECT NAME	DO 26 Site Inve	estigation
SHE ACCI	9			PROJECT NAME	AFC-001-26CC	:
		S	AMPLE IN	FORMATION		
SAMPLE ID	BHGLAOC	1903-02		DATE	15/00	TIME: 0950
MATRIX TYP	E: SO			ENTER SAME	LE NUMBERS F	FOR QC SAMPLES/
SAMPLING M	ETHOD. GOL	T 5 Part 12	المالية المالية			THIS SAMPLE
LOT CONTRO	L#			MATRIX SP	IKE (MS)	<del></del>
(Ambient Blank # -	Equipment Blank #	- Trip Blank # - Cooler #	4)	MATRIX <b>S</b> P	IKE DUP (SD)	**************************************
CHAIN-OF-CU	JSTODY #,			FIELD DUP	(FD)	_
<u>-</u>		·		AMBIENT B	LANK (AB)	
SAMPLE BEG D	PETH (FT) 3				Γ BLANK (EB) <u>Ε</u> Ζ	
SAMPLE END DE	PETH (FT)				((TB) 773 (1.575	
GRAB (X) CO	OMPOSITE ( )			INIT BLAIN	· (11) // // (11)	
CONTAINER	PRE	SERVATIVE/	A	NALYTICAL		ANALYSIS
SIZE/TYPE	+ +	PARATION		METHOD		<del></del>
4 oz Jar 5g Encore	<del>                                     </del>	Cool to 4C	Sw	5010B/SW7471A SW 8260B		Metals + Mercury VOCs
4 oz Jar	<del>                                     </del>	Cool to 4C		SW8270C	_	SVOCs
		NO:	TABLE OB	SERVATIONS		
PID REAL	DINGS	SA	MPLE CHAR	ACTERISTICS		MISCELLANEOUS
1st O.Opp		OLOR	<u>-</u>			
2nd		OOR	_			
		THER			(I) S-10-E0 Co-	-
pH Iron		ion/Reduction Potenti				ductivity(umhos/cm) (NTU)
	<del>-</del>			FORMATION		<del></del>
	•	OVERCAST/RAIN				BIENT TEMPERATURE 757
SHIPPED TO S		_	<del></del>		,	
COMMENTS	<u></u>		-	<del></del>		
SAMPLER J	i incs	72		OBSERVER	J. DAME	
MATRIX TYPE CODES				SAMPLING METHOD CODES		
DC = DRILL CUTTINGS SL=SLUDGE				B=BAILER G=GRAB		
WG=GROUND WATER SO=SOIL				BP=BLADDER PUMP HA=HAND AUGER		
LH = HAZARDOUS	S LIQUID WASTE	GS=SOIL GAS		BR=BRASS RING	ł	H=HOLLOW STEM AUGER
SH=HAZRDOUS S	SOLID WASTE	WS=SURFACE WAT	ER	CS = COMPOSITE	SAMPLE	HP≃HYDRO PUNCH
SE=SEDIMENT		SW=SWAB/WIPE			FLIGHT AUGER	SS=SPLIT SPOON
				DT = DRIVEN TU	<u></u>	SP=SUBMERSIBLE PUMP

### 724 319 HYDRO Geologic

LOCATION		NAS Ft Worth JRB		PROJECT NAME	DO26/29 RFI/SI	•	
SITE ACC	: <i> C</i>	<u> </u>		PROJECT NAME	AFC001-26CC/29	ввва	
			SAMPLE	INFORMATION			
SAMPLE ID	_	BHGLAOC 1904MS		DATE 5/15/	<u> </u>	IME 1040	
MATRIX TYP	E	so	-	ENTER SAMPLE	NUMBERS FO	R OC SAMPLES	
SAMPLING M	ETH	IOD. SPLITSPEEN EN	C 2011	BLANKS ASSOCI			
LOT CONTRO	L#		Car(12-6:	MATRIX SPIKE	(MS)	~. <u> </u>	
ł		pment Blank # - Trip Blank # - Cooler	#,	MATRIX SPIKE	DUP (SD)	_ <del></del>	
  CHAIN-OF-CU	JSTO	DDY #		FIELD DUP (FD)			
	_			AMBIENT BLAN	JK (AB)	ي جويين سيسي	
SAMPLE BEG D	PETI	f(FT) O			ANK (EB) EB		
SAMPLE END DE	PETH	1(FT) 3			3) 773 CS75		
GRAB (X) CO	MC	POSITE ( )		TRIL DESIGN (11	) ID Care		
CONTAINER	-	PRESERVATIVE/		ANALYTICAL		ANALYSIS	
\$IZE/TYPE	#			METHOD		Marie ( Manage	
4 oz Jar 5g Encore	I 3	Cool to 4C Cool to 4C	3	SW6010B/SW7471A SW8260B		Metals + Mercury VOCs	
4 oz Jar	1	Cool to 4C		SW8270C	<del>-</del>	SVOCs	
			<u> </u>				
		NO	TABLE (	OBSERVATIONS		· · · · · · · · · · · · · · · · · · ·	
PID REA			AMPLE CHA	HARACTERISTICS MISCELLANEOUS			
1 <i>st 0,096</i> , 2nd	m				<u>_</u>		
ind		ODOR OTHER					
Ha		Temperature(C) Dis	ssolved Ox	vgen (mg/L)	Specific Condu	ctivity (umhos/cm)	
		/L) Oxidation/Reduction Potent					
	_(,,			INFORMATION			
WEATHER SU	:N/C	LEAR OVERCAST/RAI			From S AMBIE	INT TEMPERATURE 759	
		DEXx HAND DELIVER _			ER		
SHIPPED TO S		<del></del>	<del></del>		<del></del>		
COMMENTS							
	5.	WILSON)		OBSERVER 5	DAMBAL	)(4!-	
		RIX TYPE CODES	<del>_</del>		SAMPLING METH	OD CODES	
DC = DRILL CUTTINGS SL=SLUDGE				B=BAILER		G=GRAB	
WG=GROUND W	-			BP=BLADDER PUMP	1	HA=HAND AUGER	
		UID WASTE GS=SOIL GAS		BR=BRASS RING		H=HOLLOW STEM AUGER	
SH≈HAZRDOUS S			TER	CS=COMPOSITE SAN	MPLE	HP=HYDRO PUNCH	
SE=SEDIMENT		SW = SWAB/WIPE		C=CONTINUOUS FLI	GHT AUGER	SS = SPLIT SPOON	
•				DT=DRIVEN TUBE		SP=SUBMERSIBLE PUMP	

### HYDRO Geologic

LOCATION:		NAS Fort Worth JRB	PROJECT NAME	DO 26 Site Investigation	-
SITE ACC	. /c		PROJECT NAME	AFC-001-26CC 	
0.1451.5.15	,	BHGLAOC1904-01	SAMPLE INFORMATION	don TNE	Lorsa Admi
SAMPLE ID			DATE 5//S	TIME_	1090
MATRIX TYPI	₹.	SO	ENTER SAMPL	E NUMBERS FOR QC	SAMPLES/
SAMPLING M	ETF	IOD SPLIT SPOON		CIATED WITH THIS S	
			MATRIX SPIK	E(MS) BHERHOLL	704M S
l		pment Blank # - Trip Blank # - Cooler	#) MATRIX SPIK	E DUP (SD) GHELAC	C/904MSD
		DDY #		D)	
CHAIN-OF-CO	-510		<del>-</del>		
SAMPLE BEG DI	DET	4 (ET) ( <sup>A</sup> )		ANK (AB)	
1			EQUIPMENT I	BLANK (EB) EB OS	<u>500</u>
SAMPLE END DE			TRIP BLANK (	(TB) <u>TB (15150</u> 0	
GRAB 🚫 CO	OMI	POSITE ( )			
CONTAINER		PRESERVATIVE/	ANALYTICAL	AN	ALYSIS
SIZE/TYPE	#		METHOD		,
4 oz Jar	1	Cool to 4C	SW6010B/SW7471A	Metals	+ Mercury
5g Encore	3	Cool to 4C	SW8260B		OCs .
4 oz Jar	1	Cool to 4C	SW8270C	S	VOCs
-			TABLE OBSERVATIONS		
			<u></u>		SCELLANEOUS
PID REAL			AMPLE CHARACTERISTICS	M	SCELLANEOUS
Ist Och	r	COLOR ODOR	<u> </u>		
2nd		OTHER	<u> </u>		
**				) Specific Conductivity	(umbos/em)
l		Temperature(C) Di			(untitos/cin/
Iron	_(mg	/L) Oxidation/Reduction Potent		y(NTO)	
		G	ENERAL INFORMATION		
WEATHER SU	IN/C	LEAR X OVERCAST/RA	N WIND DIRECTION	From S AMBIENT TE	MPERATURE 757
		DEXx HAND DELIVER		THER	` '
Į.			COOKLEK OF		:
SHIPPED TO S	<u>1L</u>	- Chicago			
COMMENTS					
SAMPLER	1	, wieson,)	OBSERVER _	DAMBAULH	·
N	1AT	RIX TYPE CODES		SAMPLING METHOD CO	DDES
DC = DRILL CUTT	ING	S SL=SLUDGE	B=BAILER	<b>G</b> =G	RAB
WG=GROUND W	ATE	R SO=SOIL	BP=BLADDER PU	MP HA=	HAND AUGER
LH=HAZARDOU	SLIC	QUID WASTE GS=SOIL GAS	BR=BRASS RING	H≠H	OLLOW STEM AUGER
SH=HAZRDOUS	SOLI	D WASTE WS=SURFACE WA	TER CS=COMPOSITE S.	AMPLE HP=1	HYDRO PUNCH
SE=SEDIMENT		SW=SWAB/WIPE	C=CONTINUOUS I		PLIT SPOON
			DT - DRIVEN TURE	2 - 92 - 9	I BMERSIBI E PUMP



CATION	NAS Ft Worth JRB	PR	OJECT NAME	DO26/29 RFI/SI	
Size ACCI	7	PF	ROJECT NAME	AFC001-26CC/29BBBA	
	5	AMPLE INF	ORMATION		
SAMPLE ID	BHGLAOC1904MSD	1	DATE: <u>5//</u> s	/UE TIME 1040	
1	SO	Ī	ENTER SAMPL	E NUMBERS FOR QC SAMPLES/	
SAMPLING METH	HOD. SPLIT SPOOLS			CIATED WITH THIS SAMPLE.	
LOT CONTROL #	·		MATRIX SPIKI	E (MS)	
(Ambient Blank # - Equi	pment Blank # - Trip Blank # - Cooler	#)	MATRIX SPIKI	E DUP (SD)	
  CHAIN-OF-CUST(	DDY #		FIELD DUP (F	D)	
			AMBIENT BLA	NK (AB)	
SAMPLE BEG DPETI	H (FT) $\mathcal{O}$			BLANK (EB) 63 CX7520	
SAMPLE END DPETH	H(FT) 3			TB) 7BCS/500	
GRAB (X COMI	POSITE ( )		2.11.2		
CONTAINER	PRESERVATIVE/	AN.	ALYTICAL	ANALYSIS	
SIZE/TYPE #	PREPARATION		ETHOD		
4 oz Jar 1	Cool to 4C		10B/SW7471A	Metals + Mercury	
5g Encore 3 4 oz Jar 1	Cool to 4C		W8260B W8270C	VOCs SVOCs	
4 oz Jar 1	Cool to 4C		1462700	31003	
	NO	TABLE OBS	ERVATIONS		
PID READING	SS SA	MPLE CHARAC	TERISTICS	MISCELLANEOUS	
1st O.OPPM	COLOR		·		
2nd	ODOR. OTHER			<del></del>	
	<del>_</del>	solved Oxygen	(mg/I	) Specific Conductivity(umhos/cm)	
_	y/L) Oxidation/Reduction Potent				
			ORMATION	(1110)	
WEATHER SUN/C	LEAR OVERCAST/RAI	N N	WIND DIRECTION	Fons Ambient Temperature 7.5 4	
SHIPMENT VIA. FE	DEXx HAND DELIVER _	COUR	IEROT	HER	
SHIPPED TO STL	- Chicago				
COMMENTS					
SAMPLER 5,0	ULSON		BSERVER _ E	DAMBAULH	
MATI	RIX TYPE CODES			SAMPLING METHOD CODES	
DC = DRILL CUTTINGS	S SL=SLUDGE	В	B=BAILER G=GRAB		
WG=GROUND WATE	R SO=SOIL	В	P=BLADDER PUM	IP HA = HAND AUGER	
LH=HAZARDOUS LIQ	QUID WASTE GS=SOIL GAS	В	R=BRASS RING	H=HOLLOW STEM AUGER	
SH=HAZRDOUS SOLI	D WASTE WS=SURFACE WA	TER C	S=COMPOSITE SA	AMPLE HP=HYDRO PUNCH	
SE=SEDIMENT	SW=SWAB/WIPE	1	=CONTINUOUS F		
· <u>-</u>	<del></del>	D	T=DRIVEN TUBE	SP = SUBMERSIBLE PUMP	

AFCEE FORM SR 11



		_		DO 36 Cito Invoci	hantion	
I CATION. NAS Fort Wo	th JRB	PR	OJECT NAME	DO 26 Site Invest	ilgation	
s ADC19		_ PR	OJECT NAME	AFC-001-26CC -		
	SAI	MPLE INFO	ORMATION			
SAMPLE ID BHGLAOC	SAMPLE ID BHGLAOC1904-02 DATE. 5/15/50 TIME 1/00					
MATRIX TYPE: SO			NTER SAMPL	E NUMBERS FO	OR QC SAMPLES/	
SAMPLING METHOD AL	T Speen			CIATED WITH T	=	
LOT CONTROL #			MATRIX SPIK	E (MS)		
(Ambient Blank # - Equipment Blank #	Trip Blank # - Cooler #)		MATRIX SPIK	E DUP (SD)	glouph throw the Are Lay	
CHAIN-OF-CUSTODY #			FIELD DUP (F	D)	-	
			AMBIENT BLA	ANK (AB)	******	
SAMPLE BEG DPETH (FT) 3				BLANK (EB) <u>E73</u>		
SAMPLE END DPETH (FT)		ļ				
GRAB ( COMPOSITE ( )			TRIP BLANK (	TB) <u>TB C.S7.</u>	<u>5</u> C()	
					ANALYSIS	
	SERVATIVE/ PARATION		ALYTICAL		ANAL 1313	
<del></del>	Cool to 4C		METHOD  SW6010B/SW7471A  Metals + Mercury			
<del> </del>	Cool to 4C		SW8260B		VOCs	
	Cool to 4C		W8270C		SVOCs	
PID READINGS	SAMI	ABLE OBSI	ERVATIONS TERISTICS		MISCELLANEOUS	
<del> </del>	DLOR					
	OOR					
	HER			<u> </u>		
pH Temperature						
Iron(mg/L) Oxidat	ion/Reduction Potential		(mv) Turbidit	y(	NTU)	
,			ORMATION	_		
WEATHER SUN/CLEAR X_	OVERCAST/RAIN	,	WIND DIRECTION	From S AMBI	ENT TEMPERATURE 759	
SHIPMENT VIA FEDEX x						
SHIPPED TO STL - Chicago						
COMMENTS						
SAMPLER J. WILLS	<u>~</u> _		bserver $\underline{\mathcal{B}}$	DAMBA	JCH	
MATRIX TYPE CO	DES	T		SAMPLING METI	HOD CODES	
DC=DRILL CUTTINGS	SL=SLUDGE	B	=BAILER		G=GRAB	
WG=GROUND WATER	SO=SOIL	В	P=BLADDER PU	MP	HA≃HAND AUGER	
LH=HAZARDOUS LIQUID WASTE		В	R=BRASS RING		H=HOLLOW STEM AUGER	
SH=HAZRDOUS SOLID WASTE	WS=SURFACE WATER			AMPLE	HP=HYDRO PUNCH	
SE=SEDIMENT	SW=SWAB/WIPE	i		FLIGHT AUGER		
	= =		T-DRIVEN TURE	· ·	SD-STIRMERSIRI E PUMP	



1							
LOCATION	NAS Fort V	Worth JRB, TX		PROJECT NAME:	Phase II RFI F	T-001	
SITE.	AOC 19			PROJECT NO.	AFC001-26CC		
	SAMPLE INFORMATION						
SAMPLE ID I	BHGLAOC				-c!	ПМЕ /5'30	
MATRIX TYPE:	 SO						
SAMPLING METH	OD. SS			BLANKS ASSOC		OR QC SAMPLES/ THIS SAMPLE	
LOT CONTROL #:		1 1-1		MATRIX SPIKE	(MS)		
(Ambient Blank # - Equip		<del></del> <del></del>	#)		DUP (SD)		
		•	"		)		
CHAIN-OF-CUSTO					· · · · · · · · · · · · · · · · · · ·	<u>-</u>	
SAMPLE BEG DPETH	LIETO C G	25			VK (AB) 17 14		
SAMPLE END DPETH					ANK (EB). 🧲 🚧		
		, 5		TRIP BLANK (T	B) <u>T6(1:5(</u>	<u>~</u>	
GRAB (*) COMP	USITE ( )						
CONTAINER	PRE	SERVATIVE/		ANALYTICAL		ANALYSIS	
SIZE/TYPE #		EPARATION		METHOD		- 1 TOP- 1	
Sg Encore 3		Cool to 4C		SW8260B		E + CIS TEE 31,7 ACL )	
1 152 184 180 1	<u> </u>			BSERVATIONS	1 246 (2 ( 196 1)	14) and only (5+ Hg	
PID READING	<u> </u>			RACTERISTICS		MISCELLANEOUS	
		OLOR	NIVIELE CHAI	VACTERISTICS		- IVIIGOELDAIVEOUS	
<u>lst ဂု . ၀၉၉၇ဂ</u> 2nd	'Oi	DOR None		•			
	;0	THER.	_				
рН	Temperature	(C) Di	ssolved Oxyg	en(mg/L)	Specific Cond	uctivity(umhos/cm)	
				(mv) Turbidity_			
				NFORMATION			
WEATHER SUN/CL	EAR /	OVEDCAST/DAI	IN'	WIND DIRECTION	AMRI	ENT TEMPERATURE /CT F	
	~	•				ENT TEMPERATURE 762 7	
		HAND DELIVER _	cc	URIEROTH	ER		
SHIPPED TO STL-	Chicago						
COMMENTS				· · · · · · · · · · · · · · · · · · ·			
AMPLER Mit observer This							
MATRIX TYPE CODES				s	SAMPLING METI	HOD CODES	
DC=DRILL CUTTINGS		SL≈ SLUDGE		B=BAILER		G=GRAB	
WG=GROUND WATER		SO=SOIL		BP=BLADDER PUMP	•	HA=HAND AUGER	
LH=HAZARDOUS LIQU		GS=SOIL GAS		BR=BRASS RING		H=HOLLOW STEM AUGER	
SH=HAZRDOUS SOLID	WASTE	WS=SURFACE WAT	TER	CS=COMPOSITE SAN	MPLE	HP=HYDRO PUNCH	
SE=SEDIMENT		SW=SWAB/WIPE		C=CONTINUOUS FLI	IGHT AUGER	SS=SPLIT SPOON	
•				DT=DRIVEN TUBE		SP=SUBMERSIBLE PUMP	

#### HYDRO Geologic

#### FIELD SAMPLING REPORT

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724 224

ATION	NAS Fort Worth JR	B, TX	PROJECT NAME.	Phase II RFI FT-001
SITE:	AOC 19		PROJECT NO-	AFC001-26CC
		SAMPLI	E INFORMATION	
SAMPLE ID	BHGLAOC1906-03	TRUBADO/	DATE: 3-20-0	01 TIME: 900
MATRIX TYPE SAMPLING ME	: <del>\$0</del> m we THOD: \$\$% 6			NUMBERS FOR QC SAMPLES/ ATED WITH THIS SAMPLE:
L	# C _ 1 _ 1 _ f_1		MA (RIX SPIKE (	MS)
1	equipment Blank # - Trip Blai	ik# - Cooler#)	1	OUP (SD)
CHAIN-OF-CUS	STODY #.		1	
SAMPLE BEG DP	ETH/ETI NIA		i	K (AB) NA
SAMPLE END DPE			EQUIPMENT BU/	NNK (EB) Eposto J
			TRIP BLANK (IB	)
GRAB 🚫 CO	MPOSITE ( )			
CONTAINER	PRESERVATIV	/E/	ANALYTICAL	ANALYSIS
	# PREPARATIO		METHOD	
Sg Encore	Coul to 4C	HCI	SW8260B	VOC. (Hygry) 1 Car 1/2 4EE-7
-1014 1 404		NOTABLE	OBSERVATIONS	
FID READI	MGS		HARACTERISTICS	MISCELLANEOUS
Ist	COLOR	SAIVII EE O	TANGTENISTICS	IMOGELD TILEOGO
2nd	ODOR			
	OTHER			
pH	Temperature	_(C) Dissolved O	xygen(nig/L)	Specific Conductivity(umhos/cm)
lien(	mg/L) Oxidation/Reduc	tion Potential	(mv) Turbidity	(NTU)
		GENERA	LINFORMATION	
WEATHER SUN	CLEAR _ 1 OVE	RCAST/RAIN	WIND DIRECTION	AMBIENT TLMPERATURE 100 F
SHIPMENT VIA:	FEDEXx HAND	DELIVER	COURIEROTHE	R
SHIPPED TO ST	L - Chicago	<u> </u>		
COMMENTS				
SAMPLER	Leteration		OBSERVER TIL	(بنا
MA	TRIX TYPE CODES		SA	MPLING METHOD CODES
DC=DRILL CUTTINGS SL=SLUDGE			B=BAILER	G = GRAB
WG=GROUND WAT			BP=BLADDER PUMP	HA=HAND AUGER
H=HAZARDOUS L	=	J GAS	BR=BRASS RING	H=HOLLOW STEM AUGER
H=HAZRDOUS SO		FACE WATER	CS = COMPOSITE SAMI	
E = SEDIMEN I	SW = SW	AB, WIPE	C=CONTINUOUS FLIG	
			DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

LOCATION.		Worth JRB, TX	PROJECT NAME Phase	II RFI FT 001		
SITE:	mark 1	9	PROJECT NO: AFCO	01-26C <b>&amp;</b>		
		SAMI	PLE INFORMATION			
SAMPLE ID	Walmon!(A	MON BHELACE 1901	DATE 3-21-01	TIME 850		
MATRIX TYP	E: 176 S	<b>D</b>	ENTER SAMPLE NUMI	BERS FOR QC SAMPLES/		
SAMPLING M	ETHOD <del>BI</del>	·OT	BLANKS ASSOCIATED	-		
LOT CONTRO	L#. 🔼 🚶	IA	MATRIX SPIKE (MS)			
(Ambient Blank # -	Equipment Blank	# - Top Blank # - Cooler #)	MATRIX SPIKE DUP (SI	D)		
CHAIN-OF-CU	STODY #		FIELD DUP (FD)	<del></del>		
			AMBIENT BI ANK (AB)			
SAMPLE BEG DI	PETH (ET)					
SAMPLE END DE			EQUIPMENT BLANK (F	B) <u>E6082101</u>		
	•	_	TRIP BLANK (TB)	<u> </u>		
GRAB 💢 C	OMPOSITE (	0	}			
CONTAINER	PF	RESERVATIVE/	ANALYTICAL	ANALYSIS		
SIZE/TYPE	# P	REPARATION	METHOD			
Charlet VON my	3 Cout	to 4C HCI to pH <27	SW8260	VOCs (App IX) + Cis 12 DCE		
て HLAnderやす	1	Cool to 4C	SW8270C	SVOCs (App IX)		
82 LL Palyon	1 Cool	to 4C HaOH pH > 9	54 6010B / 7000	Total Metals (App IX) + Hg		
		NOTAB	LE OBSERVATIONS			
PID REAL	DINGS	SAMPLE	E CHARACTERISTICS	MISCELLANEOUS		
ist 0.0 pp	$\sim$	COLOR				
2nd		ODOR				
		OTHER				
рН	Temperatu	ie(C) Dissolve	d Oxygen(nig/L) Speci	ific Conductivity(umhos/cm)		
Iron	(mg/L) Oxid	lation/Reduction Potential	(niv) Turbidity	_(niv) Turbidity(NTU)		
		GENEF	RAL INFORMATION			
WEATHER SU	N/CLEAR _ 🔏	OVERCAST/RAIN	WIND DIPECTION SE	AMBIENT TEMPERATURE 90 F		
			COURIER OTHER			
			OOKIEKOTTICK			
SHIPPED TO S	L - Chicago					
JOMMENIS						
RAMPLER	1700U	PLAY	OBSERVER JEIN			
N1	ATRIX TYPE C	ODFS	SAMPI II	NG METHOD CODES		
DC=DRILL CUTTINGS SL≈SLUDGE			B=BAILER	G = GRAB		
ACTION OF COLUM		SO=SOIL	BP≕BLADDER PUMP	HA = HAND AUGER		
AG=GROUND WA	ALER		h	A CONTROL OF THE ALLOTED		
		E GS≈SOIL GAS	PR=BRASS RING	II=IIOI LOW STEM AUGER		
AG=GROUND WA	LIQUID WAS TE	E GS≃\$OIL GAS WS=SURFACE WATER	PR=BRASS RING CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH		
AG=GROUND WA JI-HAZARDOUS	LIQUID WAS TE		i	HP=HYDRO PUNCH		

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LOCATION NAS FOU 1/22	\$	PROJECT NAME Ph	ase II RFI FT-001	
SITE: AOC 19		PROJECT NO AF	FC001-26CC	
	SAMPLE	INFORMATION		
SAMPLE ID DUP005		DATE 7 20 C	TIME. /-200	
MATRIX TYPE: SO		ENTER SAMPLE NU	JMBERS FOR QC SAMPLES/	
SAMPLING METHOD: SS			ED WITH THIS SAMPLE	
LOT CONTROL # C 1 1	]	MATRIX SPIKE (MS	)	
(Ambient Blank # - Equipment Blank # - Trip Bl	ank # - Cooler #)	MATRIX SPIKE DUI	P (SD)	
CHAIN-OF-CUSTODY #.		FIELD DUP (FD). <u>K</u>	HELACCEIC 7-63	
		AMBIENT BLANK (	AB) <u>NIA-</u>	
SAMPLE BEG DPETH (FT) 9.75	}		K(EB) ENGE ZUC)	
SAMPLE END DPETH (FT) 1025		TRIP BLANK (TB)		
GRAB(X) COMPOSITE()		(- <b>-</b>	<u> </u>	
CONTAINER PRESERVAT	TIVE/	ANALYTICAL	ANALYSIS	
SIZE/TYPE # PREPARAT	ION	метнор		
5g Encore 3 Cool to 40	<u> </u>	SW8260B	TCE	
	NOTABLE	OBSERVATIONS		
DID DEADINGS		ARACTERISTICS	MISCELLANEOUS	
PID READINGS  Ist ( C ( PO) >> COLOR	<del></del>	IMIGOELEANEOUS		
	THERE			
OTHER				
pH Temperature	(C) Dissolved Ox	kygen(mg/L) S	Specific Conductivity(umhos/cm)	
Iron(mg/L) Oxidation/Red	uction Potential	(mv) Turbidity	(NTU)	
	GENERAL	INFORMATION		
WEATHER SUN/CLEAR \ ON	/ERCAST/RAIN	WIND DIRECTION	AMBIENT TEMPERATURE 100 F	
SHIPMENT VIA FEDEXx HAN				
SHIPPED TO STL - Chicago				
COMMENTS				
SAMPLER (3 Kch)		OBSERVER 17 Ju	linster	
MATRIX TYPE CODES	· · · · · · · · · · · · · · · · · · ·	SAM	PLING METHOD CODES	
	LUDGE	B=BAILER	G=GRAB	
WG=GROUND WATER SO=SO		BP=BLADDER PUMP	HA≔HAND AUGER	
LH=HAZARDOUS LIQUID WASTE GS=S0	OIL GAS	BR = BRASS RING	H=HOLLOW STEM AUGER	
SH=HAZRDOUS SOLID WASTE WS=S	URFACE WATER	CS=COMPOSITE SAMPL	E HP=HYDRO PUNCH	
SE = SEDIMENT $SW = S$	WAB/WIPE	C = CONTINUOUS FLIGHT	T AUGER SS=SPLIT SPOON	
		DT = DRIVEN TUBE	SP=SUBMERSIBLE PUMP	

### 724 327

### LISA NEVA TELIS



CATION.	NAS Fort V	Vorth JRB, TX	1	PROJECT NAME	Phase II RI	FI FT-001
SITE:	AOC 19		!	PROJECT NO	AFC001-20	6CC
		s	AMPLE IN	FORMATION		-
SAMPLE ID	BHGLAOC	1907-03		DATE: 8-20	-01	TIME. <u>/400</u>
MATRIX TYPE.	SO			ENTER SAMPLE	NUMBERS	S FOR QC SAMPLES/
SAMPLING MET	HOD. SS					TH THIS SAMPLE:
LOT CONTROL #	<u>C</u> _1_	<u>LA</u>		MATRIX SPIKE	(MS)	
(Ambient Blank # - Equ	ipment Blank #	- Trip Blank # - Cooler i	#)	MATRIX SPIKE	DUP (SD)	- C
CHAIN-OF-CUST	ODY #		_	FIELD DUP (FD	DWG	Entrap
<u></u>				AMBIENT BLA	NK (AB)	- <del></del>
SAMPLE BEG DPET	•			EQUIPMENT BI	LANK (EB): <u>E</u>	<u>'B0590</u> 01
SAMPLE END DPET	$H(FT) = \{C\}$	25	-	TRIP BLANK (T	B)- <u>TBOE</u>	<u>300</u> 1
GRAB (📢 COM:	POSITE ( )					!
CONTAINER	PRE	SERVATIVE/	A	NALYTICAL		ANALYSIS
SIZE/TYPE #	<del>+</del>	PARATION		METHOD	_	TOP
5g Encore 3		Cool to 4C		SW8260B	<u> </u>	TCE
		NO'	FABLE OB	SERVATIONS	<del></del>	
PID READING	SS .	SA	MPLE CHAR	HARACTERISTICS MISCELLANEOUS		
15, 5 2 2 7 (7c)	CC	DLOR		· •		
2nd		DOR' T) Em l				
nu -	<del></del>		rolund Ovuna	m (ma/l)	Specific C	Conductivity (umbos/em)
Iron(mg						Conductivity(umhos/cm)
11011(111)	- Oxidai					
				IFORMATION		
WEATHER SUN/C	LEAR	OVERCAST/RAI	N	WIND DIRECTION _	<u> </u>	MBIENT TEMPERATURE 160 F
SHIPMENT VIA FE	DEXx	HAND DELIVER _	cot	JRIEROTH	ER	
SHIPPED TO: STL - Chicago						
COMMENTS						
SAMPLER /M J	SAMPLER M. J. M. M. Stens OBSERVER. J. Cilia					
MATRIX TYPE CODES				<u> </u>	SAMPLING M	SETHOD CODES
DC=DRILL CUTTING		SL=SLUDGE		B≈BAILER		G≈GRAB
WG=GROUND WATE	R	SO=SOIL		BP=BLADDER PUMI	P	HA=HAND AUGER
LH=HAZARDOUS LIQ	UID WASTE	GS=SOIL GAS		BR=BRASS RING		H≈HOLLOW STEM AUGER
SH=HAZRDOUS SOLI		WS≈SURFACE WAT	ER	CS=COMPOSITE SAI	MPLE	HP=HYDRO PUNCH
SE=SEDIMENT		SW=SWAB/WIPE		C≈CONTINUOUS FL	IGHT AUGER	SS=SPLIT SPOON
				DT=DRIVEN TUBE		SP=SUBMERSIBLE PUMP

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CATION N	AS Fort Worth JRB, TX	X	PROJECT NAME	Phase II RFI I	FT-001
SITE: A	OC 19		PROJECT NO:	AFC001-26C0	2
		SAMPLE II	NFORMATION		
SAMPLE ID BI	HGLAOC1906-02		DATE: 8-20	-01	тіме: 1435
MATRIX TYPE: SO	)		ENTER SAMPLE	NUMBERS F	OR QC SAMPLES/
SAMPLING METHO	DD: SS		BLANKS ASSOC		_
LOT CONTROL # (	2114		MATRIX SPIKE	(MS)	
(Ambient Blank # - Equipm	nent Blank # - Trip Blank # -	Cooler #)	MATRIX SPIKE	DUP (SD)	
  CHAIN-OF-CUSTOE	OY #		FIELD DUP (FD		
				NK (AB) _ ~//	- <del>9</del>
SAMPLE BEG DPETH (	FT) 4.75			LANK (EB) <u>GB</u>	
SAMPLE END DPETH (	T) 52				
GRAB (﴿ COMPO			TRIP BLANK (T	B) <u>780820</u>	<u>3</u> 0/
CONTAINER	PRESERVATIVE/	<u></u>	ANALYTICAL		ANALYSIS
SIZE/TYPE #	PREPARATION		METHOD		ANALISIS
5g Encore 3	Cool to 4C		SW8260B		TCE
		NOTABLE	DEPON THONE	<u> </u>	
DID DE LOUIS			BSERVATIONS		
PID READINGS	COLOR	SAMPLE CHAP	RACTERISTICS		MISCELLANEOUS
Is. C. Copm	ODOR / On	i			
	OTHER	-			
pH Te	emperature(C)	Dissolved Oxyg	en(mg/L)	Specific Cond	uctivity(umhos/cm)
Iron(mg/L	Oxidation/Reduction	Potential	(mv) Turbidity_	(	(NTU)
			NFORMATION		
WEATHER SUN/CLE	AR V OVERCAS	T/RAIN	WIND DIRECTION	AMR	IENT TEMPERATURE <u>/ ( ( ) (</u>
	Xx HAND DELI				ERT TEMPERATURE / L.C.
SHIPPED TO STL - C	· <del></del>	· • • • • • • • • • • • • • • • • • • •	OIII		
COMMENTS.					
SAMPLER _ 117 J	this terms	<del> </del>	OBSERVER J L	·(/()	<del></del>
	TYPE COPPE				
MATRIA C=DRILL CUTTINGS	TYPE CODES SL=SLUDGE		B=BAILER	SAMPLING MET	G=GRAB
WG=GROUND WATER	SO=SOIL		BP=BLADDER PUMP	•	HA=HAND AUGER
	O WASTE GS=SOIL GAS	1	BR = BRASS RING		H=HOLLOW STEM AUGER
H=HAZRDOUS SOLID W			CS=COMPOSITE SAN	APLE	HP=HYDRO PUNCH
E=SEDIMENT	SW=SWAB/W		C=CONTINUOUS FLI		SS=SPLIT SPOON
			DT=DRIVEN TUBE		SP=SUBMERSIBLE PUMP

#### 724 329 HYDRO Geologic

# 

LOCATION	NAS Fort	Worth JRB, TX		PROJECT NAME	Phase II RFI I	FT-001
SITE:	AOC 19			PROJECT NO.	AFC001-26C0	3
		-	SAMPLE II	NFORMATION		
SAMPLE ID I	BHGLAOC	1906-03		DATE: <u></u> <u> </u>	(1)	TIME. 1457:
MATRIX TYPE:	50			ENTER SAMPLE	NUMBERS F	OR QC SAMPLES/
SAMPLING METH	OD: SS			BLANKS ASSOC		-
LOT CONTROL #	<u>C</u> 1	1 +1		MATRIX SPIKE	(MS)	
(Ambient Blank # - Equip	ment Blank #	- Trip Blank # - Cooler	#)	MATRIX SPIKE	DUP (SD)	
CHAIN-OF-CUSTO	DY #			FIELD DUP (FD	)	_
				AMBIENT BLA	NK (AB) 13 17	<u>r</u>
SAMPLE BEG DPETH		<b>u</b> =			ANK (EB)	
SAMPLE END DPETH	(FT) / ( <sup>5</sup>	125			B) TRUERO	
GRAB (♂ COMP	OSITE ( )			TRIF BLANK (1	D) 15.(13 v26	<u>C</u> 1
CONTAINER	PRE	SERVATIVE/		ANALYTICAL		ANALYSIS
SIZE/TYPE #		EPARATION_		METHOD		
5g Encore 3		Cool to 4C		SW8260B		TCE
			TABLE OF	BSERVATIONS		
PID READINGS		_		ACTERISTICS		MISCELLANEOUS
Ist G.Oppm		DLOR				
2nd		DOR NOW				
		THER				
pH	Temperature	(C) Di	ssolved Oxyg	en(mg/L)	Specific Cond	luctivity(umhos/cm)
Iron(mg/	L) Oxida	tion/Reduction Potent	nal	(mv) Turbidity_		(NTU)
		G	ENERAL II	NFORMATION		
WEATHER SUN/CLI	EAR X	OVERCAST/RA	IN	WIND DIRECTION	AMB:	ient temperature 99 [
SHIPMENT VIA · FED						<del></del>
SHIPPED TO STL -		•				
COMMENTS						
SAMPLER	hit	?'~?_		OBSERVER	rihs	
MATRI	X TYPE CO	DES			SAMPLING MET	HOD CODES
DC = DRILL CUTTINGS		SL=SLUDGE		B=BAILER		G=GRAB
WG=GROUND WATER		SO=SOIL		BP=BLADDER PUMP	1	HA=HAND AUGER
H=HAZARDOUS LIQU	ID WASTE			BR = BRASS RING		H=HOLLOW STEM AUGER
H=HAZRDOUS SOLID		WS=SURFACE WA	TER	CS=COMPOSITE SAN	APLE .	HP=HYDRO PUNCH
E=SEDIMENT		SW=SWAB/WIPE		C=CONTINUOUS FLI		SS = SPLIT SPOON
				DT=DRIVEN TUBE		SP=SUBMERSIBLE PUMP

### 724 030

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1						<del>-</del>
LOCATION:	NAS Fort	Worth JRB, TX		PROJECT NAME	Phase II RFI F	T-001
SITE.	AOC 19			PROJECT NO:	AFC001-26CC	
			SAMPLE E	NFORMATION		
SAMPLE ID	BHGLAOC	1905-03		DATE: ダーヲロ	-01 1	ПМЕ <i>/ССО</i>
MATRIX TYPE.	SO					OR QC SAMPLES/
SAMPLING MET	THOD: SS	_		BLANKS ASSOCI		-
LOT CONTROL	#:	1 <u>+</u> ;		MATRIX SPIKE	(MS)	
		- Trip Blank # - Cooler	#)	MATRIX SPIKE	DUP (SD).	
CHAIN-OF-CUST	ΓΟDY #:			FIELD DUP (FD	)	_
				AMBIENT BLAN	IK (AB) NH	
SAMPLE BEG DPE				EQUIPMENT BL	ANK (EB) <u>どみ</u> に	722EC1
SAMPLE END DPE	. •				B) <u>"73:320</u>	
GRAB (X) COM	IPOSITE ( )				-	
CONTAINER	PRE	SERVATIVE/		ANALYTICAL		ANALYSIS
	-+	EPARATION		METHOD		
Sg Encore 3	1	Cool to 4C		SW8260B	VC(5(14, 11/14))	CLIMONETEE / ) X) and buckers + Hy
402 Jan 1	2 (	Dul totC	TADIEO	SSERVATIONS	er fragitis Chapit	X) sence bus backer + Hy
SID DE LEU						
PID READIN		OLOR	AMPLE CHAI	HARACTERISTICS MISCELLANEOUS		
1st C. C. TOTAL 2nd						<u> </u>
		THER		·		
	Temperature	(C) D <sub>1</sub>	ssolved Oxva	en (mg/L)	Specific Condu	uctivity(umhos/cm)
				(mv) Turbidity_		
				NFORMATION		
WEATHER SUN/	CLEAR X	OVERCAST/RAI	N	WIND DIRECTION _	AMBI	ENT TEMPERATURE 12 F
SHIPMENT VIA· F	EDEXx_	HAND DELIVER	cc	URIEROTHI	ER	
SHIPPED TO STL	Chicago				•	
COMMENTS				<u>, , , , , , , , , , , , , , , , , , , </u>		
SAMPLER:	Riha_			OBSERVER	Johnsty	a
MATRIX TYPE CODES SAMPLING METHOD CODES				IOD CODES		
DC = DRILL CUTTINGS SL = SLUDGE				B = BAILER	h	G=GRAB
VG=GROUND WATE		SO=SOIL		BP=BLADDER PUMP		HA=HAND AUGER
H=HAZARDOUS LI				BR=BRASS RING		H=HOLLOW STEM AUGER
H=HAZRDOUS SOL	ID WASTE	WS=SURFACE WAT	ΓER	CS=COMPOSITE SAM		HP≃HYDRO PUNCH
E=SEDIMENT		SW = SWAB/WIPE		C=CONTINUOUS FLI	GHT AUGER	SS=SPLIT SPOON
<del></del>	<u> </u>			DT=DRIVEN TUBE	_ <del>_</del>	SP=SUBMERSIBLE PUMP

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# 724, 331 HYDRO Geologic

CATION NAS FW	JKB	]	PROJECT NAME	Phase II RFI	FT-001	
SITE: AOC 19			PROJECT NO.	AFC001-26C	С	
	S	AMPLE IN	FORMATION			
SAMPLE ID BHGLAOCI	905-02		DATE: E-20	.01	TIME: /537)	
MATRIX TYPE: SO			ENTER SAMPLE	NUMBERS F	OR QC SAMPLES/	
SAMPLING METHOD: SS			BLANKS ASSOC		~	
LOT CONTROL #: C	1 <u>A</u>		MATRIX SPIKE	(MS)		
(Ambient Blank # - Equipment Blank # -	Trip Blank # - Cooler #	<i>(</i> )	MATRIX SPIKE	DUP (SD)		
CHAIN-OF-CUSTODY #:		_	FIELD DUP (FD	)	_	
			AMBIENT BLAN	NK (AB) <u>U 1</u>	H	
SAMPLE BEG DPETH (FT) 4.7	5		EQUIPMENT BI	ANK (EB)	3072601	
SAMPLE END DPETH (FT) 5 25	5			B) 13(176		
GRAB (X COMPOSITE ( )						
CONTAINER PRES	ERVATIVE/	A	NALYTICAL		ANALYSIS	
<del></del>	PARATION_		METHOD			
	ool to 4C		SW8260B	YOU (Apply)	HOS NY TEEN	
Anial 121 cm		_	<u>. / Sweete 17000.</u> SERVATIONS	Livers / App	ry) and prints + Hg	
PID READINGS			ACTERISTICS		MISCELLANEOUS	
	LOR			<u>-</u>		
2nd OD	OR Mora					
<del></del>	HER					
pH Temperature	(C) Dis	solved Oxyge	n(mg/L)	Specific Con-	ductivity(umhos/cm)	
Iron(mg/L) Oxidati	on/Reduction Potentia	al	_(mv) Turbidity_		(NTU)	
•	GE	NERAL IN	FORMATION			
weather sun/clear 🔀	_ OVERCAST/RAIN	٧	WIND DIRECTION	AME	HENT TEMPERATURE /COT	
SHIPMENT VIA. FEDEXx						
SHIPPED TO STL - Chicago				<del></del>		
COMMENTS						
SAMPLER () (2/2)			OBSERVER <u>417</u>	Dulinst	·iフ )	
MATRIX TYPE COL	MATRIX TYPE CODES SAMPLING METHOD CODES					
DC=DRILL CUTTINGS	SL=SLUDGE		B=BAILER		G=GRAB	
WG=GROUND WATER	SO=SOIL		BP≈BLADDER PUMF	•	HA=HAND AUGER	
LH=HAZARDOUS LIQUID WASTE	G\$=SOIL GAS		BR≈BRASS RING		H=HOLLOW STEM AUGER	
SH≈HAZRDOUS SOLID WASTE	WS=SURFACE WAT	ER	CS≈COMPOSITE SAM	MPLE	HP=HYDRO PUNCH	
SE=SEDIMENT	SW=SWAB/WIPE		C=CONTINUOUS FL	IGHT AUGER	SS=SPLIT SPOON	
			DT≈DRIVEN TUBE		SP=SUBMERSIBLE PUMP	



CATION		NAS Fort Worth JRB, TX	P	ROJECT NAME	Phase II RFI	FT-001
  SITE.	46	19	F	PROJECT NO.	AFC001-26C	E
	-		AMPLE IN	FORMATION		
SAMPLE ID	~	PTOS-TZHWOOD BING ACCI	908-02	DATE 1-21	-01	TIME: 845
MATRIX TYP	<b>E</b> :	wen so		ENTER SAMPLE	NUMBERS I	FOR QC SAMPLES/
SAMPLING M	ETI	HOD. DP DT		BLANKS ASSOC		<del>-</del>
LOT CONTRO	L#.	OLLA		MATRIX SPIKE	(MS)	
i		ipment Blank # - Trip Blank # - Cooler	<b>#</b> )	MATRIX SPIKE	DUP (SD)	
	-			FIELD DUP (FD	<b>)</b> )	
CHAIN-OF-CC	2311	ODY #				
SAMPLE BEG D	PET	H (FT) 4.5		AMBIENT BLA		
SAMPLE END D				-		848 2 10 1
				TRIP BLANK (T	(B)	<u>2101</u>
GRAB 🙌 C	OM.	POSITE (🍎)				
CONTAINER	l .	PRESERVATIVE/	A	NALY TICAL		ANALYSIS
SIZE/TYPE	#	<del>                                     </del>	<u> </u>	METHOD		VOCe (Ann IV) to all a to the best
CANTAL VOM	3	Cool to 4C HCl to pH <2 ■ 5		SW8260 <b>5</b> SW8270C		VOCs (App IX) + cis 1,2 bos SVOCs (App IX)
Line LI Poly	1	Cool to 4C NaOH pH>9		SW6010B/7000	_   _	► Total Metals (App IX) + H q
		·				
į Į		NO	TABLE OB	SERVATIONS		
PID REA	DIN	GS SA	MPLE CHARA	ACTERISTICS		MISCELLANEOUS
lst		COLOR				
2nd		ODOROTHER				
nH .		Temperature(C) Dis	scolved Oxyge	n (mg/L)	Specific Co	nductivity (umhos/cm)
!						
tron	_(111)	g/L) Oxidation/Reduction Potenti				
				FORMATION	,	04.5
WEATHER: SU	JN/C	lear 🙏 overcast/rai	N	WIND DIRECTION	SE_ 'AM	BIENT TEMPERATURE 70 F
SHIPMENT VIA	FE	EDEXx HAND DELIVER _	cot	RIEROTH	IER	
SHIPPED TO: S	TL	- Chicago				
COMMENTS						
SAMPLER: M	do	hinston		OBSERVER JE	ihs	
		RIX TYPE CODES			SAMPLING ME	THOD CODES
DC=DRILL CUT				B⇔BAILER		G = GRAB
WG=GROUND W	ATE	R SO=SOIL		BP=BLADDER PUM	P	HA=HAND AUGER
LH=HAZARDOU	s LIC	QUID WASTE GS=SOIL GAS		BR=BRASS RING		H=HOLLOW STEM AUGER
SH=HAZRDOUS:	SOLI	ID WASTE WS = SURFACE WAT	ΓER	CS=COMPOSITE SA	MPLE	HP=HYDRO PUNCH
SE=SEDIMENT		SW = SWAB/WIPE		C=CONTINUOUS FL	JIGHT AUGER	SS=SPLIT SPOON
				DT=DRIVEN TUBE		SP=SUBMERSIBLE PUMP



LOCATION

SITE

NAS Fort Worth JRB, TX

#### FIELD SAMPLING REPORT

PROJECT NAME Phase II RFI FT-001

PROJECT NO AFC001-26C

<u> </u>	SAMP	LE INFORMATION	
SAMPLE ID	BH6LA0C1908-03	DATE: 8-21-01	TIME <u>855</u>
MATRIX ГҮРЕ.	TO SO	ENTER SAMPLE NUMBERS I	FOR OC SAMPLES/
SAMPLING ME	THOD. DT	BLANKS ASSOCIATED WITH	_
LOT CONTROL	# O 1 1 A	MATRIX SPIKE (MS)	
(Ambient Blank # - Fi	quipment Blank # - Trip Blank # - Cooler #)	MATRIX SPIRE DUP (SD)	
CHAIN OF-CUS	TODY #	FIELD DUP (FD)	
		AMBIENT BLANK (AB)	
SAMPLE BEG DPE	етн (гт) 9,5	EQUIPMENT BLANK (ER)	·
SAMPLE END DPE	TH (F1) 10.5		
GRAB (x) CON	MPOSITE (X)	IRIP BLANK (TB)	
CONTAINER	PRESERVATIVE/	ANALYTICAL	ANALYSIS
	PREPARATION	ООНГЭМ	
.1**	2 Cool to 4C (4C) 4c (14 - 44 - 44 - 44 - 44 - 44 - 44 - 44	SW8260 <b>6</b>	VOCs (App IX)+cis  2 PC6
	2	SW8270C SW6010B <b>/7000</b>	SVOCs (App IX) Total Metals (App IX) + Na
		LE OBSERVATIONS	
PID READI		CHARACTERISTICS	MISCELLANEOUS
Ist Ocoppo	COLOR ODOR		
	OTHER		
pH	Temperature (C) Dissolved	Oxygen(mg/L) Specific Con	ductivity (umbos/cm)
		(mv) Turbidity	
	<del></del>	AL INFORMATION	
			90.7
		WIND DIPECTION SE_ AMI	BIENT TEMPERATURE 70 F
HIPMENT VIA- T	EDEX HAND DELIVER	COURIER OTHER	
HIPPED TO STL	- Chicago		
OMMENTS			
AMPLER	Rihs	OBSERVER <u>m Johnston</u>	
MA	TRIX TYPE CODES	SAMPLING MET	THOD CODES
C=DRILL CUTTING	SS SL=SLUDGE	B=BAILFR	G=GRAB
VG≈GROUND WAT	ER SO=SOIL	BP≃BLADDER PUMP	HA=HAND AUGER
H=HAZARDOUS LI	QUID WASTE GS=SOIL GAS	BR≈BRASS RING	H=HOLLOW STEM AUGER
H=HAZRDOUS SOL	ID WASTE WS=SURFACE WATER	CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
E=SEDIMENT	SW=SWAR/WIPE	C=CONTINUOUS FLIGHT AUGER	SS=SPUT SPOON
		DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP
	APO	CEE FORM SR 11	



COCATION.	NAS Fort	Worth JRB, TX	PROJECT NAME: Phase if RP	13.1-601		
SITE.	AOC 19	·	PROJECT NO AFC001-26	ĆĠ`		
		SAMPLI	EINFORMATION			
SAMPLE ID	Fron DA	1301 BH6140C1909-02	DATE. 8.22.01	TIME: 1535		
MATRIX TYPE	Man Sc	)	ENTER SAMPLE NUMBERS FOR QC SAMPLES/			
SAMPLING ME	THOD BP	* <b>&gt;</b> T	BLANKS ASSOCIATED WITH THIS SAMPLE:			
LOT CONTROL	# 0 1	_L A_	MATRIX SPIKE (MS)			
(Ambient Blank # - E	quipment Blank A	f - Trip Blank # - Cooler #)	MATRIX SPIKI' DUP (SD)			
CHAIN-OF-CUS	TODY #·		FIELD DUP (LD)			
			AMBIENT BLANK (AB) N	IA ,		
SAMPLE BEG DPE	TH (FT) 4,5	•	EQUIPMENT BLANK (EB)			
SAMPLE END DRE	ΤΗ(FT) <b>≤.</b> ≤	,	TRIP BLANK (TB) N/A			
GRAB() COM	MPOSITE(人)		TRIT BUNCK (TB)			
CONTAINER	1 001	SERVATINT!	ANALYTICAL	ANALYSIS		
·	<del></del> -l	EPARATION	METHOD	MW/C1313		
THE TON	<del>-</del>	AC UCLIO ALC 2	5033303	Amaly		
		Cool to 4C	SW8270C SW6010B	SVOCs (App IX) Lotal Metals (App IX)		
		NOTABLE	OBSERVATIONS			
PID READII			HARACTERISTICS	MISCELLANEOUS		
lst 0.0pp		DOR NOW				
		THER				
pH	Temperature	(C) Dissolved O	xygen (mg/L) Specific Cor	iductivity(umbos/cm)		
tien(i	ng/L) Oxida	tion/Reduction Potential	(mv) Turbidity	(NIU)		
			INFORMATION			
WFATHLR SUN/	CLEAR 🔏	OVERCAST/RAIN	WIND DIPECTION SE AM	BIENT TEMPERATURE 95 🚁		
			COURIER OTHER	- <del></del>		
SUPPED TO STL						
	o - Cineugo					
COMMENTS			n/ laboration			
SAMPLER- J K	ins_		OBSERVER Mohnston			
	TRIX TYPE CO		SAMPLING ME	THOO CODES G=GRAB		
DC=DRILL CUTTING NG=GROUND WAT		SI =SLUDGE SO=SOIL	BP=BLADDER FUMP	11A=IIAND AUGER		
H≃HA7ARDOUS L			HR=BRASS RING	II=HOLLOW STEM AUGER		
II-IIAZRDOUS SOI	-	WS=SURFACE WATER	CS=COMPOSITE SAMPLE	Hr-Hydro punch		
FF = SEDIMENT		SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER	SS=SPI IT SPOON		
			DT = DRIVEN TUBE	SP=SUBMERSIBLE PUMP		

#### 724 035 H**Y**DRO Geologic

LOCATION	NAS Fort Worth JRB, TX	PROJECT NAME: Phase	II RFI FT-001
SITE y	Nativito 19	PROJECT NO: AFCO	01-26C <b>C</b>
	S	AMPLE INFORMATION	
SAMPLE ID '	MITUS-127/WOOT BNGLACCISID	DATE: 8-22-01	TIME
MATRIX TYPE,	SO DISPRESENTE	_	BERS FOR QC SAMPLES/
SAMPLING MET	HOD OT	BLANKS ASSOCIATED	
	# O L L A	MATRIX SPIKE (MS)	
(Ambient Blank # - Eq	uipment Blank # - Trip Blank # - Cooler /	MATRIX SPIKE DUP (SE	)) <b>_</b>
CHAIN-OF-CUSI	ODY#	FIELD DUP (FD)	
		AMBIENT BLANK (AB)	<u> </u>
SAMPLE BEG DPE	TH (FT)	EQUIPMENT BLANK (EI	
SAMPLE END DPET	IH (FT)	i i	
GRAB() COM	IPOSITE()	TRIP BLANK (1B)	<del></del>
CONTAINER	PRESERVATIVE/	ANALYTICAL	ANALYSIS
SIZE/TYPE #	7 (23) (10)	METHOD	
40 mL VOA 3		SW8270C	SVOCs (App IX)
T L TOIY	C001 to 4C	31182700	Total vicios (App IX)
	·		
	NOT	TABLE OBSERVATIONS	
PID READIN		MPLE CHARACTERISTICS	MISCELLANEOUS
end O.Oppm	COLOR		
erra	ODOR NON		
pH	Temperature (C) Diss	olved Oxygen(mg/L) Specif	ic Conductivity (umhos/cm)
		l(niv) Turbidity	
,	<del>_</del>	NERAL INFORMATION	<del>`</del> ``
VEATHER SUN/O		WIND DIPECTION SE	AMBU'NT TEMPERATURE 9 7
		COURIER OTHER	
HIPPED TO SIL		COOKIEK OTHER	_
<del></del>		<del></del>	
COMMENTS:		0.11	<del></del>
SAMPLER J 1	Cih(	OBSERVER M Johns	ton
	RIX TYPE CODES	ł	G METHOD CODES
C-DRILL CUTTING		B=BAILER	G=GRAB
\G=GROUND WATE		RP=BLADDER PUMP	HA=HAND AUGER
	QUID WASTE GS=SOIL GAS	BR = BRASS RING	II=HOLLOW STEM AUGER
H =HAZRDOUS SOLI F=SEDIMENT		1	HP=HYDRO PUNCH
- SPIMBILIA	SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUG DT=DRIVEN TUBE	SER SS=SPLIT SPOON SP=SUBMERSIBLE PUMP



LOC ATION	NAS Fort Worth JRB, TX	PROJECT NAME: Phase II RFI	FT-001 ·
PIE W	<del>5 WKIO</del> 19	PROJECT NO: AFC001-260	TC
		E INFORMATION	
SAMPLE ID **	PHOP-12/14-001 BNGLACCIPIO -OIM	DATE: 8-22-01	TIME 1545
MATRIX TYPE #	So	ENTER SAMPLE NUMBERS	FOR OC SAMPLES/
SAMPLING MEIT	IOD AP DT	BLANKS ASSOCIATED WITH	•
	0 1 1 8-	MATRIX SPIKE (MS)	<u></u>
(Ambient Blank # - Figu	pment Blank # - Trip Blank # - Cooler #)	MATRIX SPIKE DUP (SD)	
CHAIN OL-CUSTO	ObY #-	EICLD DUP (ED)	
		AMBIENT BLANK (AB) N/	
SAMPLE BEG DPETI	1(F1)	EQUIPMENT BLANK (EB) Z8	•
SAMPLE END DEETI	r(nr)	LRIP BLANK (IB)	
GRAB() COMI	POSHE( )	TRU BUARK (11)	<del>_</del> .,
CONTAINER	EFFSURVATIVE/	ANALYTICAL	ANALYSIS
SIZE/INFE #	PREPARATION	METHOD	
10 mL \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Cool to 4C HCr to pres-	20053007	www.(glift.tx)
12 H. Ainber	Loal to 4C	SW 8270C	SVOCs (App 1X) Tutar victors (App 1X)
A LE LOID			That present (App. 100)
	NOTABLE	OBSERVATIONS	
PID READING	S SAMPLE CH	IARACTERISTICS	MISCELLANEOUS
14 0.0ppm	COLOR		
2nd * F	ODOR NON		
		ru anu (mu/l ) Sport lia Com	ductivity (mhos/cm)
	Temperature (C) Dissolved O		
fron(mg	/L) Oxdation/Reduction Potential		(1110)
		I. INFORMATION	مد مان
WEATHER SUN/CI	JAR X OVI RCASE/RAIN	WIND DIPECTION SE AME	BII NI TEMPERATURE 75 F
SHIPMENT VIA — FFI	HAND DELIVER	COURIER OHIFR	
SHIPPED TO SIL-	Chicago		
COMMENIS			
SAMPLER I R	ihs	OBSERVER M Johnston	
	RIX TYPE CODES	SAMPLING MET	<del></del>
DC -DRIL CUTHNGS		n=BAH.FR	G-GRAB
WG-GROUND WATER		RP-BLADDER PUMP	HA -HAND AUGER
!	OBD WASTE GS - SOIL GAS	BR-BRASS RING	H=HOLLOW STEM AUGUR
SH HAZEDOUS SOLI		CS=COMPOSHE SAMPLE	HP-HYDRO PUNCH
21 - 21 DIMENT	SW = SWAB/WHFC	C=CONTINUOUS FLIGHT AUGER	SS9PI II 9POON
		DT=DRIVEN TUBE	SP - SUBMURSIBLE PUMP



TIME
BERS FOR QC SAMPLES/ WITH THIS SAMPLE.
BERS FOR QC SAMPLES/ WITH THIS SAMPLE.
WITH THIS SAMPLE.
WITH THIS SAMPLE.
)
NIA
DB032201
<del></del>
ANALYSIS
SVOCs (App IX)
Total victors (App IX)
MISCELLANEOUS
ic Conductivity(unhos/cm)
(NIU)
AMBIENT TEMPERATURE 95 F
Arrow .
40 n
G METHOD CODES
G-GRAB
IIA -IIAND AUGER
H=HOLLOW SIFM AUGUR
HP-HYDRO PUNCH ER SS-SPH T-SPOON
ER SS-SPITE SPOON SP-SUBMERSIBLE PUMP



OCATION HE.	NAS Fort	Worth JRB, 1X	PROJECT NAME. Ph	ase II RELET-001 		
		CIA	IPLE INFORMATION	• ***		
SAMPLE ID	BHGLA	oc 1910 - 62		1 IME 15250 1555		
MATRIXTYPE	muh Sc	)	ENTER SAMPLE NI	ENTER SAMPLE NUMBERS FOR QC SAMPLES/		
SAMPLING MI	EHIOD. <del>DP</del>	* ÞT		ED WITH THIS SAMPLE		
OI CONTROL	1.# O .L	L A	MATRIX SPIKE (MS	)		
(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)			MATRIX SPIKE DUI	(SD)		
CHAIN-OF-CU	SIODY#		(O 1) ANG (C 1) 11			
			AMBIENT BLANK (/	AB) P/A		
SAMPLE BEG DE	ETH(FT) 4.5	•		((FB) 58082201		
SAMPLE FND DE	EHH(FT) <b>≤.</b> ≤	-	FRIP BLANK (1B)	_		
GRAB() CO	MPOSHE 人		TRAI DI MARK (10)	N L.L		
CONTAINER	rri	SERVATIVE/	ARALYTICAL	ANALYSIS		
SIZE/TYPE	# 1'R	EPARATION	метноо			
10 MIGH 07		ICUCIonII<)	CW/02/04			
1 21 1- Amburan		Cool to 4C	SW8270C SW6010B	SVOCs (App IX)  Total Metals (App IX)		
			BLE OBSERVATIONS			
ΓΙΌ READ		SAMFL OLOR	E CHARACTERISTICS	MISCELLARIEOUS		
o.opp		DOR HOM				
		THER				
pH	. I emperature	:(C) Dissolv	ed Oxygen(mg/l) Sr	eecfic Conductivity(unlios/cm)		
fren(	(mg/L) — O oda	tion/Reduction Potential	(mv) Furbidity	(ИП)		
			RAL INFORMATION			
VEATHER SUN	VCLTAR 🔏	OVEPCASI/RAIN	WIND DIPECTION SE	AMBIENT TEMPERATURE 25		
			_ COURIER OHIER _	·		
aurero to SI	L - Chicago					
OMMENIS						
			OBSERVER MJohn	ston		
<del></del>	AIRIX IVEE CO			LING METHOD CODES		
n,=iikii i Cirtii		SL=SLUDGE	B=BAH FR	G = GRAB		
A G-GROUND WA	11 R	SO=SOII	RP=BLADDER PUMP	HA=HAND AUGER		
H =HAZARDOUS I	ионо мугт	GS=SOIL GAS	HR=DRASS RING	H=HOLLOW SIEM AUGUR		
U -HAZRDOUS SC	HID WASTE	WS-SUPLACE, WATER	CS = COMPOSITE SAMPLE			
FE = SUDIMI DE		SW#SWAB/WIPE	C=CONTINUOUS FLIGHT	AUGER SS-SPITESPOON SPESUBMERSIBLE PUMP		



LOCATION:

SITE:

NAS Fort Worth JRB, TX

#### FIELD SAMPLING REPORT

PROJECT NO

PROJECT NAME: Phase II RFI FT-001

AFC001-26C€

		SAMPI	LE INFORMATION	
SAMPLE ID	BHEL	SOC1910-03	DATE: 8-22-01	TIME: (605
MATRIX TYP			ENTER SAMPLE NUMBERS	FOR OC SAMPLES/
SAMPLING METHOD ** DT  LO1 CONTROL # O 1 1 A			BLANKS ASSOCIATED WITI	
			MATRIX SPIKE (MS)	<del></del>
(Ambient Blank# -	Equipment Blank	# - Frip Blank # - Cooler #)	MATRIX SPIKE DUP (SD)-	
CHAIN-OF-CUSTODY #.			FIELD DUP (FD)	<del></del>
			AMBIENT BLANK (AB)	··
SAMPLE BEG D	•		EQUIPMENT BLANK (EB) 2	3082201
SAMPLE END DI	•		TRIP BLANK (TB)	
GRAB() CO	OMPOSITE ( <b>X</b>			
CONTAINER	FRI	ESERVATIVF/	ANALYTICAL	ANALYSIS
SIZE/1YPE		EPARA FION	METHOD	
40 mL VOA	<del>1</del>	Cool to 4C	SW8200A SW8270C	SVOCs (App IX)
1021-L-Amber	1	16 17 617 11	5W6270C	To I Made ( I to IV)
		· · · · · · · · · · · · · · · · · · ·		
		NOTABLI	E OBSERVATIONS	
PID REA	DINGS	SAMPLE C	CHARACTERISTICS	MISCELLANEOUS
1st 8-00	777	OLOR		
2nd		DOR NIN		
		THER		
			Oxygen(mg/L) Specific Con	
Iron	_(mg/L) Oxida		(mv) Turbidity	(N TU)
		-	AL INFORMATION	
WEATHER SU	IN/CLEAR X	OVERCAST/RAIN	WIND DIPECTION SC AMI	HENT TEMPERATURE $984$
SUPMENT VIA	ГЕРЕХт	HAND DELIVER	COURIEROTHER	
SHIPPED TO S				
COMMENTS.				
SAMPLER	21hs		OBSERVER Mohnstor	)
	IA FRIX TYPE CO	DDES	SAMPLING MET	THOD CODES
DC=DRH L CUTT		St.=St.UDGE	B=BAILER	G=GRAB
WG=GROUND W	AIER	SO=SOH.	RP=BLADDER PUMP	IIA=IIAND AUGER
H≂HAZARDOUS	S LIQUID WAS FE	GS=SOIL GAS	nr=Brass ring	II=HOLLOW STEM AUGER
SH-HAZRDOUS S	SOLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
SE=SEDIMEN F		SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER DT=DRIVEN TUBE	SS=SPLIT SPOON SP=SUBMERSIBLE PUMP
<del></del>				UGOLAMONDIA DE TOMO
		ለቦር	EE I ORM SR. II	



LOCATION:	NAS Fort Worth	ı JRB, TX	]	PROJECT NAME:	Phase III SI	
SITE:	AOC 19			PROJECT NO:	AFC001-26C	С
		Sz	AMPLE IN	FORMATION		
SAMPLE ID	BHGLAOC1911	-0 <b>X</b> 3		DATE: 12 65	01_	TIME: 1140
MATRIX TYPE:	so			ENTER SAMPLE NUMBERS FOR QC SAMPLES/		
SAMPLING METHOD: DT				BLANKS ASSOC		-
LOT CONTROL #:				MATRIX SPIKE	(MS)	
(Ambient Blank # - Equip				MATRIX SPIKE	DUP (SD)	
CHAIN-OF-CUSTO	)DY #·			FIELD DUP (FD	DUPUL	1_
					NK (AB)	
SAMPLE BEG DPETH	1 (FT) 9.5				ANK (EB) EG	
Į.	SAMPLE END DPETH (FT) 10.5					
GRAB (X) COMP				TRIP BLANK (T	B) TB1705	<u>so</u> 1
CONTAINER	PRESERV	ATIVE/	1	NALYTICAL		ANALYSIS
SIZE/TYPE #	1	1	21	METHOD		7.1.7.1.D.1.01.0
4 oz jar 1	Cool t	o 4C		SW8270		SVOCs (App IX)
<del></del>				OFFICE ON CONTRACTOR		
				SERVATIONS		
PID READING				ACTERISTICS		MISCELLANEOUS
n o · ○ 2nd		HOTE /6 A	7 <u>77</u>	4 AETTOM		
	OTHER					
рН	Temperature	_(C) Diss	solved Oxyge	:n(mg/L)	Specific Con	ductivity(umhos/cm)
Iron(mg						
		GE	NERAL IN	IFORMATION		
WEATHER SUN/CI	LEAR	OVERCAST/RAIN	ıΧ	WIND DIRECTION	S AME	BIENT TEMPERATURE 706
SHIPMENT VIA FEI						
SHIPPED TO STL.		MIND DELIVER _		OIII		
COMMENTS.	Chicago					
						2.115
SAMPLER ADAM	KAUSI			OBSERVERZG	L CHITTAG	cins
	RIX TYPE CODES				SAMPLING MET	
DC=DRILL CUTTINGS		=SLUDGE		B=BAILER	_	G=GRAB
WG=GROUND WATER		= SOIL		BP=BLADDER PUMI	P	HA=HAND AUGER
LH=HAZARDOUS LIQ				BR=BRASS RING		H=HOLLOW STEM AUGER
SH=HAZRDOUS SOLII		=SURFACE WAT	EK	CS = COMPOSITE SAL		HP=HYDRO PUNCH
SE=SEDIMENT 	SW	=SWAB/WIPE		C=CONTINUOUS FL	IGHT AUGER	SS=SPLIT SPOON
				DT=DRIVEN TUBE		SP=SUBMERSIBLE PUMP



LOCATION:	NAS Fort V	Worth JRB, TX		PROJECT NAME.	Phase III SI	
SITE:	AOC 19			PROJECT NO:	AFC001-26CC	i ,
				FORMATION	<u> </u>	
SAMPLE ID	BHGLAOC	1912-02		DATE: 12/05	ol 1	IME: 1135
MATRIX TYPE:	SO			ENTER SAMPLE NUMBERS FOR QC SAMPLES/		
SAMPLING MET	SAMPLING METHOD: DT			BLANKS ASSOC		=
LOT CONTROL	LOT CONTROL #			MATRIX SPIKE	(MS) V BI	161-ADC19-02 MS
		- Trip Blank # - Cooler	#)	MATRIX SPIKE	DUP (SD)	HGLACKIG- ON MUS
CHAIN-OF-CUST	TODY #:				))·	
					NK (AB)	
SAMPLE BEG DPE	TH (FT) 4.5				LANK (EB) EBU	<del></del>
SAMPLE END OPET	гн (FT) <i>5.5</i>	_			B) 761205	<del></del>
GRAB (X) COM	IPOSITE ( )			TRIF BEATR (1	n 101503	= 1
CONTAINER	PRE	SERVATIVE/		NALYTICAL		ANALYSIS
SIZE/TYPE #	<b>_</b> ∤	EPARATION		METHOD	[	
4 oz jar 1		Cool to 4C		SW8270		SVOCs (App IX)
<u> </u>		NO	TABLE OF	SERVATIONS		
PID READIN	IGS			ACTERISTICS	<del></del>	MISCELLANEOUS
Ist 0.0		OLOR 1042-1/5	אנואל יח ל	( Brown		
2nd		DOR None	<u> </u>			
		THER				
						ictivity(umhos/cm)
Iron(n	ng/L) Oxida	tion/Reduction Potent	ial	(mv) Turbidity_	(	NTU)
		G	ENERAL I	FORMATION	<del></del>	
WEATHER. SUN/	CLEAR	OVERCAST/RAI	inX	WIND DIRECTION _	S AMBI	ENT TEMPERATURE 70
				URIER OTH		
SHIPPED TO STL		- -				
COMMENTS			-			
SAMPLER ADM	n kaist	-		OBSERVER 2	CONTITION CO.	eihs
	RIX TYPE CO				SAMPLING METH	OD CODES
DC=DRILL CUTTING		SL=SLUDGE		B=BAILER		G=GRAB
WG=GROUND WATI	ER	SO=SOIL		BP=BLADDER PUME	P	HA=HAND AUGER
LH≠HAZARDOUS LI	QUID WASTE	GS=SOIL GAS		BR=BRASS RING		H=HOLLOW STEM AUGER
SH=HAZRDOUS SOL	JD WASTE	WS=SURFACE WA	TER	CS=COMPOSITE SAL	MPLE	HP=HYDRO PUNCH
SE=SEDIMENT		SW = SWAB/WIPE		C=CONTINUOUS FL	IGHT AUGER	SS=SPLIT SPOON
				DT=DRIVEN TUBE		SP=SUBMERSIBLE PUMP



LOCATION	NXS F	cet wer	th Jeb	PROJECT: P	hase II si		
SITE ACC	SITE ACC 19 AFCOOI - 26CC						
		SA	MPLE INFORM	MATION			
MATRIX	801L		SA	MPLE ID. BH	16UAOC 1913-03		
SAMPLING N	METHOD	DT	Dī	JP/REP. OF :			
BEGINNING	DEPTH_	9.5	M		MATRIX SPIKE DUPLICATE		
END DEPTH		0.5		163()	NO()		
GRAB (X)	СОМРО	SITE()	D.	ATE: 12 05 0	01 TIME: 1130		
CONTAINER PRESERVATIVE/ EXTRACTION ANALYTICAL SIZE/TYPE # PREPARATION METHOD METHOD					ANALYSIS		
4 02316		WE 4C		+	APP IX SUCLS		
	+						
			TABLE OBSE				
PID READI	INGS		O. 6 C. Bosto	CTERISTICS  NUMBER VEHLON	MISCELL ANEOUS		
2nd		ODOR Local					
		OTHER					
pH	Temper	ature	Dissolved or	cygen	Specific Conductivity		
			GENERAL INFO	RMATION			
WEATH	ER SUNA	CLEAR O	vercast/rain 🔼	WIND DRIECTI	ION S AMBIENT TEMP 70°		
SHIPME	SHIPMENT VIA: FED:X X HAND DELIVER COURIER OTHER						
SHIPPED TODTL - CHICAGO							
COMMENTS:							
SAMPLE	R ADM	n karst		OBSERVER:	ZONATHAN		
	MATRIX	TYPE CODES		SAMPI	LING METHOD CODES		
DC=DRILL CUTTIN WG=GROUND WAT LH=HAZARDOUS L SH=HAZARDOUS S SE=SEDIMENT	I ER .IQUID WAST		WATER (	B=BAILER BR=BRASS RING CS=COMPOSITE SAMI C=CONTINUOUS FLIG DT=DRIVEN TUBE V=SWAB\WIPE	G=GRAB HA=HAND AUGER PLE H=HOLLOW STEM AUGER GHT AUGER HP=HYDRO PUNCH SS=SPLIT SPOON SP=SUBMERSIBLE PUMP		



1						
LOCATION:		Worth JRB, TX		PROJECT NAME:	Phase III RFI	F <del>T 001</del>
SITE:	A≎C <del>SWMU</del> 19			PROJECT NO:	AFC001-26C0	
			SAMPLE IN	FORMATION		
SAMPLE ID	BHGLSWN	1 <del>U1938-04</del> 2 1913 -02		DATE: 12 05	01	ГІМЕ: 1215
MATRIX TYPE.		21-11 5 00.	<u> </u>	ENTER SAMPLE NUMBERS FOR QC SAMPLES/		
SAMPLING MET	THOD: DT	<del> </del>		BLANKS ASSOC		_
LOT CONTROL	 #:			MATRIX SPIKE	(MS)	
Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)				MATRIX SPIKE	DUP (SD)	
CHAIN-OF-CUSTODY #.				FIELD DUP (FD	)	_
				AMBIENT BLAN	NK (AB)	
SAMPLE BEG DPE	TH (FT) 5				ANK (EB) EGI	
SAMPLE END DPETH (FT): 5				·	в). Т81200	
GRAB (X) COMPOSITE ( )				TRIP BLANK (I	в), <del>(О()—</del> С	
CONTAINER	PDS	SERVATIVE/	_	NALYTICAL		ANALYSIS
SIZE/TYPE #	_1	EPARATION	. "	METHOD		
5g Encore 3		Cool to 4C		SW8260B	TCE	Asstone
		NO	TABLE OB	SERVATIONS		
PID READIN				ACTERISTICS		MISCELLANEOUS
1st 0.0		DLOR 16400/2	AFUL DV	ier from		
2nd		DOR pobe				
						uctivity(umhos/cm)
Iron(n	ng/L) Oxida	tion/Reduction Potent	tial	(mv) Turbidity_		NTU)
		G	ENERAL IN	FORMATION		
WEATHER SUN/	CI EAR	OVERCAST/RA	in X	WIND DIRECTION	S AMBI	ent temperature 70°
		, HAND DELIVER _		JRIEROTH	EK	
SHIPPED TO STI	, - Cincago			<del></del>	<u> </u>	
COMMENTS			<del></del>			<del></del>
sampler. <u>ADA</u>	n karst	<u>-</u>		OBSERVER 50K	INTHAN R	tH2
MATRIX TYPE CODES				5	SAMPLING METI	HOD CODES
DC=DRILL CUTTINGS SL=SLUDGE				B=BAILER		G=GRAB
WG=GROUND WAT	ER	SO=SOIL		BP=BLADDER PUMF	)	HA=HAND AUGER
LH=HAZARDOUS L	QUID WASTE	GS=SOIL GAS		BR=BRASS RING		H=HOLLOW STEM AUGER
SH=HAZRDOUS SOL	ID WASTE	WS=SURFACE WA	TER	CS=COMPOSITE SAN	MPLE	HP=HYDRO PUNCH
SE=SEDIMENT		SW=SWAB/WIPE		C=CONTINUOUS FL	GHT AUGER	SS=SPLIT SPOON
				DT=DRIVEN TUBE		SP=SUBMERSIBLE PUMP



LOCATION:	NAS Fort Worth JRB, TX	PROJECT NAME: Ph	nase III RFI <del>-FT-001</del>	
SITE:	SWMU-19	PROJECT NO: A	FC001-26CC	
		SAMPLE INFORMATION	٦	
SAMPLE ID	BHGL <del>SWMU1938-01:5</del> AOCIQ 13 -03	DATE: 12 05 C	1 TIME. 1225	
MATRIX TYP		ENTER SAMPLE NI	UMBERS FOR QC SAMPLES/	
SAMPLING M	ETHOD: DT		TED WITH THIS SAMPLE:	
LOT CONTRO	L #:	MATRIX SPIKE (MS	S):	
	Equipment Blank # - Trip Blank # - Cooler	#) MATRIX SPIKE DU	MATRIX SPIKE DUP (SD)	
CHAIN-OF-CU	STODY #:	FIELD DUP (FD).	FIELD DUP (FD).	
SAMPLE BEG D	PETH (FT)· K	AMBIENT BLANK (	AMBIENT BLANK (AB)  EQUIPMENT BLANK (EB)EBIZOSO!  TRIP BLANK (TB)TB 12050!	
CONTAINER	PRESERVATIVE/	ANALYTICAL	ANALYSIS	
SIZE/TYPE	# PREPARATION	METHOD	_	
- 4 oz jar	T Cool to 4C	SW6010, SW7000	Ba, Cd, Cr. Pb. Zn	
- 4 oz jar	1 — Cool to 4C	SW8270	2 methnapth/B2EHP/Naphthalene	
5g Encore	3 Cool to 4C	SW8260B	Acetoric/-BTEX/-PCE/-TCE	

	NOTABLE	OBSERVATIONS	
PID READINGS	SAMPLE C	HARACTERISTICS	MISCELLANEOUS
1st 0.0 .CC	OLOR 104R 6/8 BROW	mattem Agram	
	DOR NOVE		
	THER		
pH Temperature	(C) Dissolved C	Oxygen(mg/L) Specific Con	nductivity(umhos/cm)
Iron(mg/L) Oxidat	tion/Reduction Potential	(mv) Turbidity	(NTU)
	GENERA	L INFORMATION	_
SHIPMENT VIA. FEDEX x SHIPPED TO STL - Chicago		WIND DIRECTION _ S AM COURIER OTHER	BIENT TEMPERATURE 70
SAMPLER. POWN VALST		OBSERVER. SONATH	CHUSI CAI
MATRIX TYPE CO	DES	SAMPLING ME	THOD CODES
DC=DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G=GRAB
WG=GROUND WATER	SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS	BR=BRASS RING	H=HOLLOW STEM AUGER
SH=HAZRDOUS SOLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
SE=SEDIMENT	SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER	SS=SPLIT SPOON
		DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP



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LOCATION:		NAS Fort Worth JRB, TX		PROJECT NAME: Ph	ase II RFI FT-001		
SITE	r· 3	ACC SWMU 19		PROJECT NO: A	FC001-26C <b>E</b> .	(	
			SAMPLE I	INFORMATION			
SAMPLE ID		FT09-12AWG01-7 THELIFO	C 1905-04	DATE: Q-15-0	/ TIME	1225	
MATRIX TYP	E:	wo so		ENTER SAMPLE NUMBERS FOR QC SAMPLES/			
SAMPLING M	ETF	IOD BP3C		BLANKS ASSOCIAT			
LOT CONTRO	)L#:	0112		MATRIX SPIKE (MS	S)		
(Ambient Blank # -	- Equi	pment Blank # - Trip Blank # - Cooler	#)	MATRIX SPIKE DUI	P (SD)		
CHAIN-OF-CU	JSTO	DDY #		FIELD DUP (FD)			
				AMBIENT BLANK (A	AB). <u> </u>		
SAMPLE BEG O	PETI	1(FT) 2.5		EQUIPMENT BLAN	K (EB) EROPICTO	1	
SAMPLE END D	PETH	(FT) 3		TRIP BLANK (TB)			
GRAB (y) C	OMF	POSITE (( )		_	·		
CONTAINER		PRESERVATIVE/		ANALYTICAL	YSIS		
SIZE/TYPE	#	PREPARATION		METHOD			
- 40 mL VOA:	; 3	Cool to 4C HCl to pH < 2 ×		SW82604		App IX) + _ S / 2 DCc	
I-L-Amber's	, <b>2</b> 5	Cool to 4C		SW8270C		App IX)	
L FOLYX	<u> </u>	Cool to 4C NaOH pH > 9 ts		SW6010B/7000	fotal Metals	S (App IX) + Ug	
		NO	TABLE O	BSERVATIONS			
PID REA	DING	S SA	MPLE CHAI	RACTERISTICS	MISC	ELLANEOUS	
lst <u>0 0,00,</u>	•~	COLOR June	1300 C20	<u> </u>			
2nd		odor he,∨					
		OTHER					
pH	_	Temperature(C) Dis	solved Oxyg	gen(mg/L) S <sub>l</sub>	pecific Conductivity	(umhos/cm)	
Iron	_(mg	L) Oxidation/Reduction Potenti	al	(mv) Turbidity	(NTU)		
		GI	ENERAL I	NFORMATION			
WEATHER. SU	IN/CL	EAR OVERCAST/RAI	N	WIND DIRECTION	AMBIENT TEMP	erature <u>100 F</u>	
		DEXx HAND DELIVER _					
HIPPED TO S	TL -	Chicago					
OMMENTS							
AMPLER - N	1 J	ohnsten		OBSERVER. J. L. 1.	1199		
	IATR	IX TYPE CODES		SAMI	PLING METHOD CODE		
C=DRILL CUTT	INGS	SL=SLUDGE		B=BAILER	G=GRAE	ı	
VG=GROUND WA	ATER	SO=SOIL		BP=BLADDER PUMP	HA=HAN	ND AUGER	
H=HAZARDOUS	LIQ	JID WASTE GS=SOIL GAS		BR=BRASS RING	H=HOLL	OW STEM AUGER	
H=HAZRDOUS S	OLID	WASTE WS=SURFACE WAT	ER	CS=COMPOSITE SAMPLE	HP=HYD	RO PUNCH	
E≃SEDIMENT		SW=SWAB/WIPE		C=CONTINUOUS FLIGHT			
				DT=DRIVEN TUBE SP=SUBMERSIBLE PUMP			



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SITE: PROJECT NO: AFC001-26CE  SAMPLE INFORMATION  SAMPLE ID FT09-12AWG01 7 100081501 DATE: 7-15-01 TIME:  MATRIX TYPE: WG 7 50 ENTER SAMPLE NUMBERS FOR QC	SAMPLES/
SAMPLE ID FT09-12AWG01 0 1000 8) SO DATE: 7-15-01 TIME:  MATRIX TYPE: WG 7 SO ENTER SAMPLE NUMBERS FOR OC	SAMPLES/
MATRIX TYPE: WG 7 SO ENTER SAMPLE NUMBERS FOR OC	SAMPLES/
1 ENTER SAMPLE NUMBERS FOR OC	
[	SAMPLE:
SAMPLING METHOD BP	
LOT CONTROL #	
(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)  MATRIX SPIKE DUP (SD)	<del></del>
CHAIN-OF-CUSTODY # FIELD DUP (FD)	
AMBIENT BLANK (AB). NIA	
SAMPLE BEG DPETH (FT) O EQUIPMENT BLANK (EB) EBOS IS	<u>ت</u> ا
SAMPLE END DPETH (FT) 3  TRIP BLANK (TB) T307 1501	- <del></del>
GRAB() COMPOSITE(x)	
CONTAINER PRESERVATIVE/ ANALYTICAL AN	ALYSIS
SIZE/TYPE # PREPARATION METHOD	
	(App IX)
/ <del></del>	+(App IX) ファイ tals (App IX) ・ パラ
41. 3 COLI 104 C   SW-1716, SW110, Towloach   Western, to College	
NOTABLE OBSERVATIONS	<u> </u>
PID READINGS SAMPLE CHARACTERISTICS M	SCELLANEOUS
Ist O. Crose COLOR bown	
Ist A.C. Coor. COLOR BACKS  2nd Copper ODOR MAKE	
OTHER	
pH (C) Dissolved Oxygen (mg/L) Specific Conductivity	(umhos/cm)
Iton(mg/L) Oxidation/Reduction Potential(mv) Turbidity(NTU)	
GENERAL INFORMATION	
WEATHER SUN/CLEAR X OVERCAST/RAIN WIND DIRECTION AMBIENT TE	MPERATURE 100 F
SHIPMENT VIA FEDEX x HAND DELIVER COURIER OTHER	
SHIPPED TO STL - Chicago	
COMMENTS	
SAMPLER <u>M Julinston</u> OBSERVER . 1 Heringer	
MATRIX TYPE CODES SAMPLING METHOD CO	DES
DC≠DRILL CUTTINGS SL=SLUDGE β=BAILER G=GI	RAB
WG=GROUND WATER SO=SOIL BP=BLADDER PUMP HA=1	IAND AUGER
LH=HAZARDOUS LIQUID WASTE GS=SOIL GAS   BR=BRASS RING   H=110	DLLOW STEM AUGER
· · · · · · · · · · · · · · · · · · ·	IYDRO FUNCH
1	PLIT SPOON UBMERSIBLE PUMP



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LOCATION.	NAS Fort	Worth JRB, TX		PROJECT NAME Phase II RFI FT-001				
SITE	SWMU 19	)		PROJECT NO AFC001-26CE				
			SAMPLE I	NFORMATION				
SAMPLE ID	F <del>T09-12A</del>	WG013 2BC2 150	21	DATE. 2-15-01 TIME: 16-30				
MATRIX TYPE	WG			ENTER SAMPLE	NUMBERS F	OR QC SAMPLES/		
SAMPLING ME	THOD: BP	73 E	,	BLANKS ASSOCIA		-		
LOT CONTROL	#:	10		MATRIX SPIKE (	MS)	<u>-</u>		
(Ambient Blank # - E	quipment Blank	# - Trip Blank # - Cooler	#)	MATRIX SPIKE D	OUP (SD):			
CHAIN-OF-CUS	TODY #:			FIELD DUP (FD)				
				AMBIENT BLAN	K (AB) - 1	A		
SAMPLE BEG DPE	TH (FT) 🔑	<i>l</i> A		EQUIPMENT BLA				
SAMPLE END DPE	TH (FT)			TRIP BLANK (TB				
GRAB (L) COM	MPOSITE (	)		TRIT BEANK (18	) <u>Nocert</u>	<u>U</u> 1		
CONTAINER	PR	ESERVATIVE/	<u> </u>	ANALYTICAL		ANALYSIS		
		EPARATION		METHOD				
		Cool to 4C		SW8260A		VOCs (App IX)		
		4C NaOH pH>9		SW8270C SVDCs (App IX) SW6010B / / (				
_ 121019		rin.		BHOOTOD / /C( C)		Total Metals (App IX) + H e		
		NO	TABLE OF	SERVATIONS	-			
PID READII	NGS	SA	AMPLE CHAR	ACTERISTICS		MISCELLANEOUS		
lst		OLOR						
2nd		DOR.						
		THER						
						luctivity(umhos/cm)		
Iron(r	ng/L) Oxida	ition/Reduction Potent	ial	(mv) Turbidity		(NTU)		
		Gl	ENERAL IN	NFORMATION				
WEATHER SUN	CLEAR X	OVERCAST/RAI	N	WIND DIRECTION	АМВ	IENT TEMPERATURE 100 F		
				URIEROTHER				
SHIPPED TO: STI	Chicago							
COMMENTS.								
SAMPLER. ()	Hering	er		OBSERVER	Johnst	0 <u>n</u>		
MA	TRIX TYPE CO	DDES		SA	MPLING MET	HOD CODES		
DC=DRILL CUTTING	GS	SL=SLUDGE		B=BAILER		G=GRAB		
WG=GROUND WAT	ER	SO=SDIL		BP=BLADDER PUMP		HA=HAND AUGER		
.H=HAZARDOUS L	IQUID WASTE			BR=BRASS RING		H=HOLLOW STEM AUGER		
SH=HAZRDOUS SOI	ID WASTE	WS=SURFACE WAT	ER	CS=COMPOSITE SAMP		HP=HYDRD PUNCH		
SE=SEDIMENT		SW=SWAB/WIPE		C=CONTINUOUS FLIG	HT AUGER	SS=SPLIT SPOON SP=SURMERSIBLE PLIMP		



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1 1	4.0		<u> </u>	0	· • • · · ·		
LOCATION NAS FLO J	(13)		PROJECT NAME	rno	K (L 3 L		
SITE: <u>400 19</u>			PROJECT NAME AFCCC1- 26CC				
	SA	MPLEIN	FORMATION				
SAMPLEID TOCKIS	71 - T		DATE: 3-15	-01	TIME 300		
MATRIX TYPE. N.C.			ENTER SAMP	LE NU	JMBERS FOR QC SAMPLES/		
SAMPLING METHOD					ED WITH THIS SAMPI E.		
LOT CONTROL #: ()	<u>LA</u>		MATRIX SPI	IKE (MS	)		
(Ambient Blank # - Equipment Blank #	- Trip Blank # - Cooler #)		MATRIX SPI	IKE DUP	'(SD)		
CHAIN-OF-CUSTODY #.			FIELD DUP (	(FD)			
			AMBIENT B	LANK (/	AB) <u>N/19</u>		
SAMPLE BEG DEPTH (FT) N	1A				((EB) EBOZISTI		
SAMPLE END DEPTH (FT)							
GRAB() COMPOSITE()			TRIT BLANK	r (1ft) =			
(OLEANIED DE	Stensor Alliver		NAT MEKAN				
<del>                                     </del>	ESERVATIVE/ EPARATION	ſ	NALYTICAL METHOD	ŀ	ANALYSIS		
40ml vo3 2 Caci m41		`````	Luck		NOUS (PARTY) TO IS HE DUE		
	NOT	ABLEOR	CEBULTIONS				
Sin Francisco		_	SERVATIONS				
PID READINGS  Ist C	OLOR	IPLE CHAR	ACTERISTICS		MISCEL_ANEOUS		
<del></del>	DOR		<u> </u>				
	THER						
pH Temperature	e(C) Disso	olved Ovyge	п(mg/	/L) S <sub>I</sub>	pecific Conductivity(umhos/cm)		
Iron(mg/L) Oxida	tion/Reduction Potential		_(mv) Turbidit	ty	(NTU)		
	GE	NERAL IN	FORMATION				
WEATHER SUNICLEAR X	OVERCAST/RAIN _		WIND DIRECTION _		AMBIENT TEMPERATURE 166 F		
SHIPMENT VIA FEDEXx					<u> </u>		
SHIPPED TO STL - Chicago							
COMMENTS							
SAMPIER M JULINST	(الدن		OBSERVER J	1 Her	inger		
MATRIX TYPE CO	DES		<del></del>		PLING METHOD CODES		
DC=DRILL CUITINGS	SL=SLUDGE		B=BAILER	54171	G=GRAB		
WG=GROUND WATER	SO=SOIL		BP=BLADDER PU	MP	HA=HAND AUGER		
LH=IIAZARDOUS LIQUID WASTE	GS=SOIL GAS		BR=BRASS RING		H=HOLLOW STEM AUGER		
SH=HAZARDOUS SOLID WASTE	WS=SURFACE WATER	<u> </u>	CS=COMPOSITE S	AMPLE			
SE=SEDIMENT	SW=SWAB/WIPE		C=CONTINUOUS I				
			DT=DRIVEN 1UBE	<b>E</b>	SP=SUBME (SIBLE PUMP		



CATION	NAS Fort Worth J	RB, TX		PROJECT NAME. Phase II RFI FT-001				
SITE	AOC 19			PROJECT NO AFC001-26CE A				
		SAN	IPLE I	NFORMATION				
SAMPLE ID	WHGLTA19EWG	01		DATE 2/21/0	2	TIME. 1315		
MATRIX TYPE				ENTER SAMPLE NUMBERS FOR QC SAMPLES/				
SAMPLING ME	THOD. BP			BLANKS ASSOCIA		-		
LOT CONTROL	#	•	-	MATRIX SPIKE (M	IS)	<del>_</del>		
(Ambient Blank # - E	quipment Blank # - Trip B	lank # - Cooler #)		MATRIX SPIKE DU	UP (SD)	<del></del>		
CHAIN-OF-CUS	TODY #:			FIELD DUP (FD)				
Pamo				AMBIENT BLANK	(AB)			
SAMPLE BEG DPI				EQUIPMENT BLAN	NK (EB)			
SAMPLE END DPE	ETH (FT) 7.45		}	TRIP BLANK (TB)				
GRAB (X) CO	MPOSITE ( )							
CONTAINER	PRESERVA	rive/		ANALYTICAL	]	ANALYSIS		
<del></del>	# PREPARAT		_	METHOD TOE				
40 mL VOA	3 Cool to 4C HC	1 pH < 2		SW8260B		TCE		
		NOTA	BLE O	BSERVATIONS				
PID READ	NGS	SAME	LE CHAP	RACTERISTICS		MISCELLANEOUS		
1000 m	COLOR							
2nd	ODOR ,	UENL_				<del></del>		
nH 7 ) C		OH(C) Dissol	ved Oxvo	ren /a 13 (mg/I)	Specific Cor	ductivity <u>/37</u> (umhos/cm)		
,		r		(mv) Turbidity				
	,ing, 2) Oxidation, rec			NFORMATION				
					1	BIENT TEMPERATURE 46 F		
		. / '	-			BIENT TEMPERATURE 16 F		
1		D DELIVER	co	URIER OTHER				
SHIPPED TO: ST	L - Chicago							
COMMENTS								
SAMPLER M	Mahel			OBSERVER MAGO	hiustor	<u> </u>		
MA	TRIX TYPE CODES	<del></del>		SAN	MPLING ME	THOD CODES		
DC=DRILL CUTTIN	igs sl=s	LUDGE		B=BAILER		G=GRAB		
WG=GROUND WA		OIL		BP=BLADDER PUMP		HA=HAND AUGER		
LH=HAZARDOUS I	LIQUID WASTE GS=S	OIL GAS		BR=BRASS RING		H=HOLLOW STEM AUGER		
SH=HAZRDOUS SC		URFACE WATER		CS=COMPOSITE SAMPL		HP=HYDRO PUNCH		
SE=SEDIMENT	SW⇒S	WAB/WIPE		C=CONTINUOUS FLIGH	IT AUGER	SS=SPLIT SPOON		
		_		DT=DRIVEN TUBE		SP≈SUBMERSIBLE PUMP		

#### GROUNDWATER FIELD SAMPLING DATA SHEET

Well No - WHGLTA19ECSO	Location AOC 19						
Sampler(s). m mahad /m Johnsto	Project Name: Phase II RFI FT-001						
Well Depth 7.03 [+	Project #. AFC001-26CEA Date: 2/21/61 Time 1710						
DTW (ft). He DTP (ft).	Courier FedEx UPS Hand Other						
MP Ht Above/Below Ground Surface	Sampling Method . BP						
Condition of Bottom of Well.	Type of Pump: Badder						
Screen Interval (ft): 7 (-) 2	Weather (sun/clear, overcast/rain, wind direction, ambient temperature).						
Well Diameter (in).	Oreicast, windy (Nov), 46'F						
Placement of Pump (ft).							

Field Parameters

+ Wester L	evel bel	beur tep a	f pung	<u> </u>		Taramete.				
	Depth to		Total	ър́Н.	Temp.	Cond.	ORP			Type, Size, and Amount
2-23-		Rate			(C).	(umhos/cm)	(mv)	(mg/L)	(NTU)	of Sediment Discharged
	, (ft)	(L/m)	(L) \		7m 10 30		2 , (4	1. 1. 1. h		
1725	*	0.2	Stan	puni	p					
1735		0.2	ュ	7.43	14.31	336	<u> </u>	6.10	ke.l:	Oken, pardet
1240		0,2	3	7.3人	14.37	337	A51.8	6.22	335	
1745		0.2	4		15.30		<u> 353.5</u>	13.13	15 2	
1750		0.2	5	7.36	15.29	340	254.6	604	12.9	
1755		0.2	_ ي	ファスフ	15.21	339	355.2	605	10.0	
1200		0.2	7	7.25	15,27	34C	15416	6.13	1، م	
1705		0,2	3	7,24	15.23	339	357.O	6.14	4.01	5-10
1810	₩	0.2	9	7.25	15 29	339	3525	6,13	4.01	cilen + 5 th bile
1215	Colli	ct hi	GLTH	0500	3601					
		<u> </u>								
		1	_							
L	<u> </u>									

#### Observations

7.4	Minma)	Laur	Madium	Liab	Very Strong	H2\$	Fuel-like
Odor:	None	LOW	Wiediuin	rugu		1125	1 doi inc
Notes:	•	_					
		,					
	<u>-</u>		<u> </u>				
			772				



MATRIX TYPE CODES

LH=HAZARDOUS LIQUID WASTE GS=SOIL GAS

SL=SLUDGE

WS=SURFACE WATER

SW = SWAB/WIPE

SO = SOIL

DC = DRILL CUTTINGS

WG=GROUND WATER

SE=SEDIMENT

SH=HAZRDOUS SOLID WASTE

	· · · · · · · · · · · · · · · · · · ·			
PROJECT NAME 'Phase	II RFI FT-001			
PROJECT NO AFCO	01-26CE			
LE INFORMATION				
DATE. 2-22-01	TIME: /530			
ENTER SAMPLE NUME	BERS FOR OC SAMPLES/			
BLANKS ASSOCIATED	•			
MATRIX SPIKE (MS)				
MATRIX SPIKE DUP (SD	)			
FIELD DUP (FD)				
AMBIENT BLANK (AB)	NA			
EQUIPMENT BLANK (EB) E2022201				
TRIP BLANK (TB)	3022201			
ANALYTICAL	ANALYSIS			
METHOD	TCE			
5 W 8200B	ice			
E OBSERVATIONS				
CHARACTERISTICS	MISCELLANEOUS			
<del>-</del>				
Oxygen 6.68 (mg/L) Specif	ic Conductivity 365 (umhos/cm)			
19.6 (mv) Turbidity 6.99	7 (NTU)			
AL INFORMATION				
wind direction $ \mathcal{N} \omega $	AMBIENT TEMPERATURE 43.F			
	<del></del> -			
OBSERVER MJohns	ton			
	PROJECT NO AFCOOLE INFORMATION  DATE. 2-22-0    ENTER SAMPLE NUME BLANKS ASSOCIATED  MATRIX SPIKE (MS)  MATRIX SPIKE DUP (SD  FIELD DUP (FD)  AMBIENT BLANK (AB)  EQUIPMENT BLANK (EFTRIP BLANK (TB)  TRIP BLANK (TB)  ANALYTICAL METHOD SW8260B  DE OBSERVATIONS  CHARACTERISTICS  Oxygen 6.68 (mg/L) Specify (Mg			

AFCEE FORM SR 11

B=BAILER

BP=BLADDER PUMP

CS=COMPOSITE SAMPLE

C=CONTINUOUS FLIGHT AUGER

BR=BRASS RING

DT=DRIVEN TUBE

SAMPLING METHOD CODES

G=GRAB

HA=HAND AUGER

HP=HYDRO PUNCH

SS = SPLIT SPOON

H=HOLLOW STEM AUGER

SP=SUBMERSIBLE PUMP

#### GROUNDWATER FIELD SAMPLING DATA SHEET

Well No WHGLTAI9FOSI	Location. AOC 19					
Sampler(s). mmahal, m Johnston	Project Name Phase II RFI FT-001					
Well Depth 6.92	Project #. AFC001-26CBA Date: 2-22-0 / Time. /4/0					
DTW (ft) 4.15 DTP (ft):	Courier: X FedEx UPS Hand Other					
MP Ht Above/Below Ground Surface: N/A	Sampling Method: BP					
Condition of Bottom of Well: 300d	Type of Pump Bladder					
Screen Interval (ft).6.4(-) 1.9	Weather (sun/clear, overcast/rain, wind direction, ambient temperature).					
Well Diameter (in) 2	Sunny, NW wind, 43°F					
Placement of Pump (ft) 5.5	``\					

#### Field Parameters

	Depth to	Flow	Total .	pH.	Temp.	Cond.		DÕ		Type, Size, and Amount
week to be a second of	Water )	Rate (L/m)	Volume .		) · · (C)	(umhos/cm)	(mv)	(mg/L)	(NTU)	of Sediment Discharged
1425	¥	0.1	Start		sine					Cloudy, no odor
/435		0.15	1.25	7.10	15.35	356	239.6	5.55	115	01
1440		0.15	2.0	7.02	l	<i>3</i> 55	241.4		94.1	
1445		0.15	2.75		14.88	352	245.8	6.05	65.0	
1450	_ ]_	0.15	3.5	6.92	15.08	355	245.9	5.99	51.5	
1455		0.15	4.25	6,93	<i>15.17</i>	358	२५७.1	4.89	34,2	
1500		0.15	5	6.93	15.19		046.5	6.58	24.6	
1505		0.15		6.92	15.24	361	247.9	7.54	17.7	
1510		0.15	6.5	4.92	<i>15.35</i>	364	2491	6.94	10.6	
1515		0.15	7.25	6.91	15.34	364	249.6	6.76	7,9	
1520		0.15	8	6.92	15.42	365	249.8	6.69	6.65	
1525	V	0.15	8.75	6.93	15.45	365	249.6	6.68	6.99	_
1530	Cou	ect-	samo	lew	46LTA	105/00	501		_	
								_	_	
									_	

+ DTW be	low to	p of pu	mp.	(	Observ	vations		
Color: Clea	Other (	(describe):	_					 
Odor: Non	le Low	Medium	High	Very Strong	H2S	Fuel-like	 	
Notes:	,			<u> </u>			 	 ,
						-	 	
		_					 	
Signed/Samp	ler(s): 7	n Joh	oth					



CATION.	NAS Fort Worth JRB, TX	PROJECT NAME	Phase II RFI FT-001
SITE:	AOC 19	PROJECT NO.	AFC001-26CE
		SAMPLE INFORMATION	
SAMPLE ID	WHGLTA19GWG01m	DATE 02.	22.01 TIME: /600
MATRIX TYPE.		ENTER SAMPLE	E NUMBERS FOR QC SAMPLES/
SAMPLING METI	HOD. Bb		CIATED WITH THIS SAMPLE.
LOT CONTROL #	·	MATRIX SPIKE	E (MS)
1	ipment Blank # - Trip Blank # - Coo	oler #) MATRIX SPIKE	E DUP (SD)
•	ODY #		D)
CHAIN-OF-CUST	OD1#		
SAMPLE BEG DPET	H (FT)		NK (AB)
SAMPLE END DPET	• •	į –	LANK (EB) <b>£ 60 2. 22 0 i</b>
<u> </u>		TRIP BLANK (T	(B) TB022201
GRAB ☎ COM	POSITE ( )		
CONTAINER	PRESERVATIVE/	ANALYTICAL	ANALYSIS
SIZE/TYPE #	PREPARATION	METHOD	TOP
40 mL VOA 3	Cool to 4C HCl pH < 2	SW8260B	TCE
	1	NOTABLE OBSERVATIONS	
PID READING	GS	SAMPLE CHARACTERISTICS	MISCELLANEOUS
Ore pr		no odse.	<u> </u>
2nd C, U ff	ODOR 6	1	
·· 1 1 m		D 110 (17)	
_			Specific Conductivity 326 (umhos/cm)
Iron(mg	g/L) Oxidation/Reduction Pot	ential 1473 (mv) Turbidity	(NTU)
		GENERAL INFORMATION	
WEATHER SUN/C	LEAR (OVERCAST)	RAIN WIND DIRECTION \( \frac{1}{2} \)	VE / THAMBIENT TEMPERATURE 50
SHIPMENT VIA FE	DEX _x HAND DELIVE	R COURIER OTH	IER
SHIPPED TO STL	- Chicago		
COMMENTS		<u>-</u>	
	R. Wallace		Rihs
SAMPLER	W.Canare		
	RIX TYPE CODES	<u> </u>	SAMPLING METHOD CODES
DC=DRILL CUTTING: WG=GROUND WATEI		B=BAILER	G=GRAB
	UID WASTE GS=SOIL GAS	BP=BLADDER PUMF BR=BRASS RING	P HA=HAND AUGER H=HOLLOW STEM AUGER
SH=HAZRDOUS SOLI.		Į.	
SE=SEDIMENT	SW=SWAB/WIPI	l	
	J. C.	DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

AFCEE FORM SR 11

The second of th

#### GROUNDWATER FIELD SAMPLING DATA SHEET

Well No . WHGLTA190052	Location AOC 19					
Sampler(s). R. Wallace, J.R.hs	Project Name Phase II RFI FT-001					
Well Depth 6,99	Project #. AFC001-26CE JZ-22-01 Date: 1455 Time.					
DTW (ft) 4.46' DTP (ft) -	Courter FedEx UPS Hand Other					
MP Ht Above Below Ground Surface: 0.4	Sampling Method: BP					
Condition of Bottom of Well: Clam	Type of Pump QED Bladder pump					
Screen Interval (ft) (-) 2'-7'	Weather (sun/clear) overcast/rain, wind direction, ambient temperature).					
Well Diameter (in)	NE looph 54°					
Placement of Pump (ft). 5.73'						

#### Field Parameters

2	Depth to Water	Flow Rate		pH	(C) 3	Cond. (umhos/cm)	(mv)	DO (mg/L).	Turb. (NTU)	Type, Size, and Amount of Sediment Discharged			
- , s	(fj) }	(L/m)	*, (L)	74 10 10		MA							
1505	Ground	0.85	6.25	7.56	15.41	32000	117 3	5.53	572	Slattly Hoody med			
1510	water	0.05	05	7.49	15.53	327.0	114.3	58	45.2				
1515	belin	0;25	C.75	7.43	1531	327.0	123.3	4.94	377	· · · ·			
1573	topot	005	1.0	7.37	15,78	3280	120.0	4 34	31. 9	, ,			
1525	pine	005	1.05	7 34	16 62	351,0	127.4	4.91	25:1	Clear no et c			
1532		0.5	1.5-	7.30	16.12	336.0	136.4	492	19.7	e le			
1535		6.05	1.75	7.27	15.30	334.0	137,3	4.96	14.2	, ,,			
1740		كران د	2 0	7.26	15.44	327 6	1413	4.80	12 0	7			
1545		0 (1	2 65	727	1534	365,0	143.5	4,5-1	8.7	. ,			
1550		6 c 3	2.5	726	15,43	368.6	144.3	4.77	7. L	· · ·			
1565		. 07	レフグ	7.25	15.45	3160	1473	476	5,0	,			
	1100	t <-	- 26/7	/-									
		,	•		: 								

#### Observations

Color:	Clear	Other (	describe).				
Odor,	None	Low	Medium	High	Very Strong	H2S	Fuel-like
Notes.			_				
	_			-	<u> </u>	_	
					1	_	
_		_		.11.	1 4/1/		
Signed	Sample	r(s).	7//	476°C	I VELLI		1. 1/20
		_	7 50		7/		

BEST AVAILABLE COPY



CATION	NAS Fort Worth JRB, TX		PROJECT NAME	Phase II RFI	FT-001			
SITE.	AOC 19		PROJECT NO AFC001-26CE					
		SAMPLE E	NFORMATION	<del></del>				
SAMPLE ID	WHGLTA004WG01		DATE 8/22/	0/	TIME /040			
MATRIX TYPE.	wg				OR QC SAMPLES/			
SAMPLING METH	IOD: BP		BLANKS ASSOC					
LOT CONTROL #:			MATRIX SPIKE	(MS)				
!	pment Blank # - Trip Blank # - Coole	r#)	MATRIX SPIKE	DUP (SD)				
CHAIN-OF-CUSTO	DDY #			)				
			AMBIENT BLAN	_	_			
SAMPLE BEG DPETH	i (FT)				1 dedicated pump			
SAMPLE END DPETH	I (FT)				•			
GRAB (✗) COMF	POSITE ( )		IRIP BLANK (1.	B) 7802220	2.7			
				<del>-</del>				
CONTAINER SIZE/TYPE #	PRESERVATIVE/ PREPARATION	1	ANALYTICAL METHOD		ANALYSIS			
40 mL VOA 3	Cool to 4C HCl pH < 2	<del>                                     </del>	SW8260B		TCE			
	NO	OTABLE OF	BSERVATIONS					
PID READING	<u> </u>		HARACTERISTICS MISCELLANEOUS					
2nd 2nd	ODOR none	<del>-</del>	<del></del>	<u> </u>				
21ld	OTHER			<del></del> -				
pН	Temperature(C) D	ussolved Oxyg	en (mg/L)	Specific Cond	uctivity (umhos/cm)			
	/L) Oxidation/Reduction Poten							
		•	NFORMATION					
WEATHER SUN/C	EAD OVERCAST/PA	AIN	WIND DIRECTION	NW AMB	IENT TEMPERATURE 4375			
					ENT TEMPERATURE 43;			
			URIEROTH	ER				
SHIPPED TO. <u>STL</u>	Chicago							
COMMENTS-								
SAMPLER MY	rahal		OBSERVER	Definst	·			
MATR	IX TYPE CODES		SAMPLING METHOD CODES					
DC=DRILL CUTTINGS	SL=SLUDGE		B=BAILER G=GRAB					
WG=GROUND WATER	SO=SOIL		BP=BLADDER PUMP		HA=HAND AUGER			
LH=HAZARDOUS LIQ	UID WASTE GS=SOIL GAS		BR=BRASS RING H=HOLLOW STEM AUG					
SH≈HAZRDOUS SOLII	WASTE WS=SURFACE WA	TER	CS=COMPOSITE SAMPLE HP=HYDRO PUNCH					
SE=SEDIMENT	SW = SWAB/WIPE		C=CONTINUOUS FLI	GHT AUGER	SS=SPLIT SPOON			
			DT = DRIVEN TUBE		SP=SUBMERSIBLE PUMP			

#### GROUNDWATER FIELD SAMPLING DATA SHEET

Well No WHGLTA004	Location. AOC 19						
Sampler(s): mmahal, mlohuston	Project Name Phase II RFI FT-001						
Well Depth. 233	Project #: AFC001-26CE PY Date. 2/22/01 Time. 9/5						
DTW (ft) 17.01 DTP (ft). N/A	Courier FedEx UPS Hand Other						
MP Ht. Above/Below Ground Surface: -0.2	Sampling Method: BP						
Condition of Bottom of Well:	Type of Pump. Dedicated bladder						
Screen Interval (ft) (13.3 - 23.3)	Weather (sun/clear, overcast/rain, wind direction, ambient temperature).						
Well Diameter (in). 2	Sunny, winds from Nw, 35'F						
Placement of Pump (ft): Dedicated							

#### Field Parameters

	Depth to	Flow	Total : Volume		Temp:	Cond. (umhos/cm)		DO (mg/L)		Type, Size, and Amount of Sediment Discharged
	(ft)	(L/m)				** a** a				
1000	17.01	0.2	Star	t pu	mp-				8.1-2	Clear
1003	17.02	0.2	1	7.31	13.54	450	180.4	2.14	8.1	
1010	17.02	0.2	2_	7.28	18.59	439	189.8	2.05	7.7	
1015	17.02	0.2	3	7.03	18.84	400	192.1	187	6.6	
bro	17.02	0.2	니	6.87	19.23	383	200.1	a.1/	53_	
1025	17 02	0.2	5	6.81	19.34	380	2013	1.73	5.21	
1030	17.02	0.7	6	6.78	19.31	380	2024	1.88	4.77	
1035	17.02	0.2	7_		19.30		a03.3	1.98	4.29	
1040	17.02	0.2	33	(011	ct Sa	mple 1	WH6	LTAC	0400	601
										_
							. <b>.</b>		_	
		_								

#### Observations

Color.	Clear	Other (	(describe).						,	
Odor (	None			Hıgh	Very Strong	H2S	Fuel-like			
Notes										
					<u>_</u>				_	
										_
			_					_		
Signed	Sample	r(s).	1 Maha	l ,7/	y John	1				



OCATION NA	S Fort Worth JRB, TX		PROJECT NAME Phase II RFI FT-001					
	C 19		PROJECT NO:	AFC001-26CE <b>A</b>				
GII E.	· · · · · ·	<del>-</del>	FORMATION					
SAMPLE ID WH	GLTA80IWG01		DATE. 2/22/01 TIME1230					
MATRIX TYPE: WO			ENTED CAMBLE	E NUMBERS FOR QC SAMPLES/				
SAMPLING METHOD	). Bb	<del>-</del>		CIATED WITH THIS SAMPLE.				
LOT CONTROL #			MATRIX SPIKE	E (MS)				
] —	 nt Blank # - Trip Blank # - Cooler	. #\	MATRIX SPIKE	<del></del> <del></del>				
}		")		DW04				
CHAIN-OF-CUSTODY	<i>``</i> #:		FIELD DUP (FI	D)				
PUMP SAMPLE BEG DPETH (F	- 1501		AMBIENT BLA	NK (AB)				
SAMPLE BEG DPETH (F	1) [0.8	-	EQUIPMENT B	RLANK (EB) <u>EBO 2220</u>				
SAMRLE END DPETH (FT			TRIP BLANK (1	TB022201				
GRAB (X COMPOS	ITE()			,				
CONTAINER	PRESERVATIVE/	1 A	NALYTICAL	ANALYSIS				
SIZE/TYPE #	PREPARATION		METHOD					
40 mL VOA 3	Cool to 4C HCl pH < 2		SW8260B	TCE				
	NC	TABLE OB	SERVATIONS					
PID READINGS		AMPLE CHAR	ACTERISTICS	MISCELLANEOUS				
0.000m	COLOR							
2nd 0	ODOR none	<del></del>						
	OTHER		2.24	35te				
			•	Specific Conductivity				
Iron(mg/L)	Oxidation/Reduction Potent			(0·7_5_(NTU)				
<u></u>			NFORMATION	• •				
WEATHER SUNJELEAR	R OVERCAST/RA	IN	WIND DIRECTION	ambient temperature $43+$				
SHIPMENT VIA FEDEX	•							
SHIPPED TO STL - Ch	icago							
COMMENTS								
10 - 10 -	1-0		In.	a block				
SAMPLER //////	ana		OBSERVER	1 Johnston				
	TYPE CODES		SAMPLING METHOD CODES					
DC=DRILL CUTTINGS	SL=SLUDGE		B=BAILER	G=GRAB				
WG=GROUND WATER	SO=SOIL		BP=BLADDER PUMP HA#HAND AUGER					
LH=HAZARDOUS LIQUID SH=HAZRDOUS SOLID WA		TCD	BR=BRASS RING H=HOLLOW STEM  CS=COMPOSITE SAMPLE HP—HVDBO PLINCH					
SE=SEDIMENT			CS=COMPOSITE SAMPLE HP=HYDRO PUNC C=CONTINUOUS FLIGHT AUGER SS=SPLIT SPOON					
SE—JEDIMEN I	SW=SWAB/WIPE .		DT = DRIVEN TUBE	LIGHT AUGER SS=SPLIT SPOON SP=SUBMERSIBLE PUMP				

#### GROUNDWATER FIELD SAMPLING DATA SHEET

Well No. WHGLTA801	Location: AOC 19						
Sampler(s) hy mahat 111 Jakaston	Project Name Phase ii RFI FT-001						
Well Depth. 13-95	Project #- AFC001-26CEA Date. 2/22/01 Time 11/0						
DTW (ft). 7.841 DTP (ft).	Courier: X FedEx UPS Hand Other						
MP Ht. Above/Below Ground Surface:	Sampling Method . BP						
Condition of Bottom of Well-	Type of Pump. Bladder						
Screen Interval (ft): 14( - ) 4	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):						
Well Diameter (in) 2	Sun, 43°F, Nui winds						
Placement of Pump (ft): 10.2							

#### Field Parameters

Time	Depth to Water	Flow	Total Yolume	E ; pH	Temp.	Cond.	ORP	DO	Turb.,	Type, Size, and Amount
· · · · · · · · · · · · · · · · · · ·	(ft)	(L/m)	(r).		(C)	(umhos/cm)	(mv)	(mg/L)		of Sediment Discharged
1125	1.90	0.25	F .	tpur	1					
1135	7.89	@.25	2.5	6.27	16.94	360	.335.1	5.88	55	
1140	1.29	0,35	3.75	6.79	17.58	354	<u>a30.9</u>	5.04	32.5	
1145	7.39	0.25	5.0	6.74	17.49	<i>3</i> 5a	221.7	4.57	19.43	
1150	7.29	0.25	6.25	6.72	17.67	353	J26.5	ର, ୦७	14.26	
1155	7.39	0.25	7,5	6.71	17.77	354	3226	4.10	3.55	
1200	7.90	0 25	8.75	6.71	18.21	357	215.4	407	10.65	
1205	7.90	0,25	10	6,63	18.40	1	वार .7	• •	8.39	
1210	7,90	0.25	11,25	6.68	:235	359	708.9	4 10	9.45	
1312	7.90	0.25	12.5	6.68	18.41	362	1,435	2.03	505	
1220	7.90	6.25	13 75	6.69	1-7.73	360	203,2	3,29	5.28	
1235	7.90	0,25	15	60.03	1826	354	<u> 3</u> 03,2	2,34	6.93	
1230	Cod	ect i	JH6LF1	9801	WG01		_			

#### **Observations**

Color (	olor Clear Other (describe):										
Odor:	None	Low	Medium	High	Very Strong	H2S	Fuel-like				
Notes:										<u> </u>	_
										·	
Signed/	Sampler	(s).									



		<del> </del>	<del> </del>	_ <del></del>			
-OCATION	NAS Fort V	Vorth JRB, TX	PROJECT NAME.	Phase II RFI FT-001			
TE:	AOC 19		PROJECT NO	AFC001-26CE <del>-Ø//</del>	,		
	<del>_</del>	SAMPI	E INFORMATION				
SAMPLE ID	WHGLTA8	olwooth Dupo4	DATE. 2/22/0	S /TIME-	1230% 1200		
MATRIX TYPE	: WG		ENTER SAMPLE N	HIMPEDS EOD OC	SAMDIES/		
SAMPLING ME	ETHOD: BP		<del></del>	TED WITH THIS S			
LOT CONTROL			MATRIX SPIKE (M	AS)			
į.		- Trip Blank # - Cooler #)	MATRIX SPIKE D	UP (SD)	_		
CHAIN-OF-CU	STODY #:		FIELD DUP (FD)	DWO4-WHO	6LTA801W601		
<b>!</b>			AMBIENT BLANK	. (AB)			
SAMPLE BEG DP	PETH (FT) D	8'		NK (EB) EBO 222	01		
SAMPLE END DP	ETH (FT) 13.	95'		TB022201	•		
GRAB (X CO	MPOSITE ( )		Jan Den Marie				
CONTAINER		SERVATIVE/	ANALYTICAL	AN	ALYSIS		
SIZE/TYPE		EPARATION	METHOD	,			
40 mL VOA	3 Cool to	4C HCl pH<2	SW8260B		TCE		
				<del>-</del>			
[		NOTABL	E OBSERVATIONS				
PID READ			CHARACTERISTICS	Mi	SCELLANEOUS		
0.0ppr	<u> </u>	OLOR 10 No. 1					
		DOR none	<del></del>	<del></del>			
77 / 1 7			274 ( 8)		354		
			Oxygen <u>2.34</u> (mg/L) 03.2 (mv) Turbidity (		203 - Lumhos/cm)		
	(Ilig/L) Oxida		AL INFORMATION	(1110)			
	. )				112.0		
WEATHER. (SU	NICLEARX_	OVERCAST/RAIN	WIND DIRECTION	AMBIENT TE	MPERATURE 73+		
SHIPMENT VIA	FEDEXx_	HAND DELIVER	COURIEROTHER				
SHIPPED TO ST	TL - Chicago						
COMMENTS	_						
SAMPLER M	Maha	Q	OBSERVER	bhrston			
M.	ATRIX TYPE CO	DES	SAL	MPLING METHOD CO	DES -		
DC=DRILL CUTTI	NGS	SL=SLUDGE	B=BAILER	G = GR	G=GRAB		
WG=GROUND WA	TER	SO=SOIL	BP=BLADDER PUMP	HA = H	IAND AUGER		
LH=HAZARDOUS	LIQUID WASTE	GS=SOIL GAS	BR=BRASS RING	H=HC	OLLOW STEM AUGER		
SH=HAZRDOUS SO	OLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SAMP		Y DRO PUNCH		
SE=SEDIMENT		SW=SWAB/WIPE	C=CONTINUOUS FLIGH	HT AUGER SS≔SE	LIT SPOON l		

DT=DRIVEN TUBE

SP=SUBMERSIBLE PUMP



LOCATION.

NAS Fort Worth JRB

#### FIELD SAMPLING REPORT

PROJECT NAME

ABOUT Phase IF RFI /SI

SITE QOC	19 + 8W	mu 19	PROJECT NAME	AFC001-1 <del>6BBD</del> 🥱 🤅	24C€A			
		SA	MPLE INFORMATION					
SAMPLE ID	£ <del>B0400</del> 7	10555033	DATE: <u>2/2</u> 2	101 TIME				
MATRIX TYP	E· WG	<del>-</del>	ENTER SAMPLE	ENTER SAMPLE NUMBERS FOR QC SAMPLES/				
SAMPLING M	ETHOD.	-		CIATED WITH THIS				
	DL #'		MATRIX SPIKI	E (MS)				
(Ambient Blank # -	Equipment Blank #	- Trip Blank # - Cooler #)	MATRIX SPIKI	E DUP (SD)				
CHAIN-OF-CU	JSTODY#		FIELD DUP (FI	D)				
			AMBIENT BLA	NK (AB)	_			
1	EPTH (FT) 🔥	; •	EQUIPMENT B	LANK (EB)				
	EPTH(FT) 1	IA .	TRIP BLANK (	ГВ)				
GRAB ( ) CO	OMPOSITE ( )							
CONTAINER	PRE	SERVATIVE/	ANALYTICAL		ANALYSIS			
SIZE/TYPE	<del> </del>	EPARATION	METHOD					
40 mL VOA	Cool to	4C/HCl to pH < 2	SW3260B		VOCs			
		NOTA	ABLE OBSERVATIONS					
PID REA	DINGS	SAM	PLE CHARACTERISTICS		MISCELLANEOUS			
1 st	C	OLOR						
2nd		DOR						
		THER	1.10		/,h /			
į.	_		lved Oxygen(mg/L					
I fron	_(mg/L) Oxida		(mv) Turbidity	(NIU				
[		_	ERAL INFORMATION		1:715			
WEATHER SU	jn/clearX	OVERCAST/RAIN	wind direction	AMBIENT	TEMPERATURE 75			
SHIPMENT VIA	FEDEXx	HAND DELIVER	COURIER OTI	HER				
SHIPPED TO S	STL -							
COMMENTS								
SAMPLER	Moth	eston	OBSERVER	1 Mahal				
N	AATRIX TYPE CO	DDES		SAMPLING METHOD	CODES			
DC = DRILL CUTT	TINGS	SL=SLUDGE	B=BAILER	G=	=GRAB			
WG=GROUND W	ATER	SO=SOIL	BP=BLADDER PUM	IP HA	=HAND AUGER			
LH=HAZARDOU.	S LIQUID WASTE	GS=SOIL GAS	BR=BRASS RING	H=	HOLLOW STEM AUGER			
SH=HAZARDOUS	S SOLID WASTE	WS=SURFACE WATER	R CS=COMPOSITE SA	MPLE HP	=HYDRO PUNCH			
SE=SEDIMENT		SW = SWAB/WIPE	C=CONTINUOUS F	LIGHT AUGER SS	=SPLIT SPOON			
			DT=DRIVEN TUBE	SP	=SUBMERSIBLE PUMP			

OCATION:	NAS Fort Worth JRB, TX	PROJECT NAME: Phase II	RFI FT-001, Round 2 Groundwat				
SITE	ACIC 19	PROJECT NO. AFCOU	1-26CE				
	SAN	IPLE INFORMATION					
AMPLE ID	WHGLTA050WG02	DATE: 4/6/01	TIME				
ATRIX TYPE	· WG	ENTER SAMPLE NUMBE	ERS FOR OC SAMPLES/				
AMPLING ME	THOD: BP	BLANKS ASSOCIATED V					
OT CONTROL	# 0 9 1 A	MATRIX SPIKE (MS):					
mbieni Blank # - E	iquipment Blank # - Trip Blank # - Cooler #)	MATRIX SPIKE DUP (SD)					
HAIN-OF-CUS	STODY #:	FIELD DUP (FD):	——————————————————————————————————————				
		AMBIENT BLANK (AB); _					
AMPLE BEG DP	ETH (I T) —	EQUIPMENT BLANK (EB):	*B 040601				
AMPLE END DPE		TRIP BLANK (TB)					
RAB ( CO	MPOSITE ( )	1811 358.14 (13)					
CONTAINER	PRESERVATIVE/	ANALYTICAL	ANALYSIS				
SIZE/TYPE	# PREPARATION	METHOD					

SW8260B

	NOTABLE	OBSERVATIONS	
PID READINGS	SAMPLE C	HARACTERISTICS	MISCELLANEOUS
V.9 SPM C	OLOR. Clem		
2nd 4.0 PPM O	DOR. NOR		
	THER:		
pH 662 Temperature	(C) Dissalved C	oxygen 364 (mg/L) Specific Con	ductivity $\Psi _{\mathcal{D}}$ (unthos/cm)
Iron (mg/I) Oxida	non/Reduction Potential 230	(mv) Turbidity 2-8	(NTU)
	GENERA	L INFORMATION	
(SALIX)		(A)	
WEATHER SUNGEAR	OVERCAST/RAIN	WIND DIRECTION AME	HENT TEMPERATURE
SHIPMENT THA FEDEX A	HAND DELIVER	COURILR OTHER	705 /
•			,
SHIPPED TO. STL - Chicago			
COMMENTS.			
SAMPLER Chilatophe	r Donohue	OBSERVER KENT OUT	<u>9n</u>
MATRIX TYPE CO	DDES	SAMPLING MET	TIOD CODES
DC=DRILL CUTTINGS	SL=SLUDGE	B-BAILER	G=GRAB
WG=GROUND WATER	so=solL	BP = BLADDER PUMP	HA-HAND AUGER
LH=HAZARDOUS LIQUID WASTE	GS = SOIL GAS	BR=BRASS RING	H=HOLLOW STUM AUGER
SH=HAZRDOUS SOLID WASTE	WS-SURFACE WATER	CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
SE=SEDIMEN (	SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER	SS = SPLIT SPOON
ł		DT=DRIVEN TUBE	SP=SUBMERSIBLE PLMP

AFCEE FORM SR.11

to be a brain on

40 mL VOA

Cool to 4C HCI pH < 2

TCE

#### GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: WHGLTA050	Location: AOC 18
Sampler(s): C. Dorohue to Dwgn	Project Name: Phase II RFI FT-001, Round 2 Groundwater
Well Depth. 7-00	Project # AFC001-26CE Date: 46/01 Time: 1352
DTW (n) 48.7 DTP (ft).	Courier: FedEx UPS Hand Other
MP Ht. Above/Below Ground Surface: -0.112	Sampling Method: Story Low Flow
Condition of Bottem of Well: Hard	Type of Pump: Bladder Pump
Screen Interval (ft). (2.03 - 7.03)	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Well Diameter (in): 2	party sunny, south wind, 705%
Placement of Pump (ft): 5,94	4 . 10 Zdilly 1 Zhall sill bes L

#### Field Parameters

	10 હું વૃદ્ધિયા છે. ભાગાસ્ત્ર	Ber in	Hedding.	្រក់	The state of the s	(0.11)	(0)			gran Steen bettenning trinspirar and the tringer of
	- 18i4: 1	DOM:	a En	22						
1352	_*	0.140	0	6.86	21-68	¥29	181.3	4.83	28.2	
1357	<u></u>	0.14	0.7	6.69	21-96	432	197-6	y.02	24-1	
1402		0.14	1-4	6.66	22-17	434	29.3	3.78	166	
1407		0-10	1-9	6.71	21-69	Y28	19.6	4-47	12-3	
1412		0-10	2,4	663	21-93	424	2/2-4	3.84	7-0	
1417		0-10	2.9	6.60	20.02	412	22).4	3.73	4.7	
1422		0-10	3.4	6.60	19.82	409	2269	367	¥3	
1427		0-10	3-9	662	20.01	410	230.4	3.64	2.8	
N30	50	moles	797	9n						
		Y								
					,					
			l							

#### **Observations**

Color: Clear Other (color: None ) Low		<u> </u>	S Fuel-like	none			<del></del>
Notes: + Note: =				• -	otate	ир	alove
Signed/Sampler(s):	7/2	ME		Ka+D.			

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# CODA RF21 AAVITABLE

#### . GROUNDWATER FIELD SAMPLING DATA SHEET

Well No : WHIGHTADS1	Location. NAS For Worth JRB, Texas
Sampler (s) C. Donohue, K. Duron	Project Name. April 2001 Semi-Annual Sampling
Sampler (s) C. Donohue, K. Duran Well Depth. 6-93	Project #: AFC001-330AA Date: 4/6/0/ Time: 10/7
DTW (ft): 4-25" DTP (ft):	Courler: X_FedExUPSHandOther
MP Ht. Above/Below GS:_0 071	Sampling Method: Low Flow
Condition of Battom of Well	Type of Pump: Bladder
Screen Interval (ft): 2-7	Weather (sun/clear, overcast/rain, wind direction, ambient temperature)
Well Diameter (tr) 2	partly sunny, hund, south wild, to the
Placement of Punip Inlet (ft). 5.59	א איני וויישר אוייושר אוייושר איניין

#### Field Parameters

Time	Depth to Water (ft)	Flow Rule ( (L/min)	Total Volume (L)	bardH barda in	Temp.	Cond. (umhos/em)	ORP (my)	DO (曲)/LS	Turb. (NTU)	Type, Size, and Amount of Sediment Discharged
ادوا	<del>*</del>	0-110	0	7-20	19.65	446	177.6	6.52	112	
1026		0.110	0.55	7-18	19.01	351	180.8	5-32	138	
1831		0.110	1.1	6.99	18,96	329	1859	4.45	18	
1036	-	0.10	1.65	687	19-33	364	190.8	3-56	69	
1041		0.110	2.2	6.78	19-94	399	1926	283	49	
1046	1	0-110	2.75	6.73	20.29	424	193.7	2.46	32_	
1051	~	0-110	3,3	6.70	20.44	440	194.9	2.12	21.9	
1956	_	0-110	3.85	6.67	20-37	447	196.2	1-84	18-1	
110)		0-110	44	6-63	20.34	508	212.3	1-69	155	,
1106		0.10	4,95	6.65	19.42	447	198.3	1-35	10.6	
ш		0-110	5.5	6-64	19-56	441	197-1	1.21	9.8	
1116		0-110	6.05	6-64	20.10	Y-55	197.0	1.22	6.7	
1121		0-110	6-6	6.64	20-41	¥58	197.2	1-24	6.P	
1125	SA	mples	1 1							
		′								

#### Observations

•		_	describe):									
Odor:	(None				Very Strong							
Notes:	Y	/ (IN +	mean	שוני	Depth to		iter -	ampa	Stras	UP	Q DIVER	MOTORIK-
			11/0 9/31	4,	<u> </u>	<u></u>	7.4.	-+ +		<del>- +1</del>		
<b>}</b>	·											
							<del></del>					
	<del></del>				<del>_</del>				_			
24		<del></del>		<del>- A</del>	4 5	7		/10				
Signed	/Samp	(cr s):		-8/	400	4		(10 J)	Ma			

ZITA SITOGSSZI



LOCATION NAS Fort Worth JRB, Texas				PROJECT NAME	April 2001 Semi-	Annual Sampling			
SITE:			,	PROJECT NAME: AFC001-33DAA					
		S.	AMPLE IN	FORMATION					
SAMPLE ID	WHGLTA	051WG14		DATE:	6/01	TIME: 112.5			
MATRIX TYPE	: WG			ENTER SAMPI	FNIIMBEDS	FOR QC SAMPLES/			
SAMPLING MI	ETHOD: Lov	Flow		BLANKS ASSO	CIATED WITH	I THIS SAMPLE:			
LOT CONTROL	L#: 0 P	I A		MATRIX SPIK	(E (MS)	<del>-</del>			
(Ambient Blank # - I	Equi, iment Blank	# - Trip Blank # - Coole	er	MATRIX SPIX	E DUP (SD):				
CHAIN-OF-CU	STODY #:			FIELD DUP (F	FD):	<u></u>			
		<u> </u>			ANK (AB).	•			
SAMPLE BEG OEF	PTH (FT):	N/A	1			EB 04060)			
SAMPLE END DEF	ידא (דד)	N/A		TOID DI ANY	CERTAIN (ED)	T8 040601			
GRAB(X) (	COMPOSITE	()		TRIP BLANK	((8)	10 0 10 00 1			
CONTAINER	PRES	SERVATIVE/		VALYTICAL	<del></del>	ANALYSIS			
SIZE/TYPE	# PRE	PARATION		METHOD	J				
40 mL VOA	Cool to	4C/HCI to pH<2		SW8260B		YOCs			
- <u></u> -		No	TARLE OR	SERVATIONS	<del>-</del>				
PID READ!			MPLE CHAR	CTERISTICS	<del></del>	MISCELLANEOUS			
ast O		DLOR: CLOAT							
		MED.		1.1.6	<u> </u>	- 1 7 7 1 1 T			
			163	y style	01 0.57	14 4/8/01			
pH b by	Tempērai	nte <u>1 1 1000(C)</u> 1	Dissolved Ox	ygen <u>0-32</u> (n	ng/L) Corlaticti	viry Y6 (umhas/cm)			
Iron	(m3/L) Oxid	ation/Reduction Pote	ntial	Turbi	dity 6-0	(NTU)			
oor	ዜ/	GE	NERAL IN	FORMATION					
WEATHER SUN	CLEAR	OVERCAST/RA	AIN	WIND DIRECTI		mbient temperature			
	•	_ HAND DELIVER	_			765 °F			
SHIPPED TO ST						702 7			
COMMENTS SAMPLER	< Dona	hue		OBSERVER	To Durgh	)			
					<u> </u>				
MA	T'UX TYPE CO	DES			SAMPLING METH	HOD CODES			
DC=DRILL CUTTINGS SL=SLUDG				B=BAILER		G=GRAB			
NG=GROUND WA	TER	SO=SOIL		BP=BLADDER PU	MP	Ha=Hand Auger			
H=HAZARDOUS	LIQUID WAST	GS=SOIL GAS		BR=BRASS RING		H=HOLLOW STEM AUGER			
H=HAZARDOUS	SOLID WAST	WS=SURFACE WAT	re	CS=COMPOSITE S.	AMPLE	HP=HYDRO PUNC			
E=SEDIMENT		SW=SWAB/WIPE		C=CONTINUOUS I	LIGHT AUGER	SS=SPLIT SPOON			
				DT=DRIVEN TUBE	_	SP=SUBMERSIBLE PUMP			

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### CODA RF21 AAWTVBFE

#### GROUNDWATER FIELD SAMPLING DATA SHEET

Well No : WHGLTA052	Location: AOC 19
Simpler(s). F. Dreen C. Donate	Project Name. Phase II RFI FT-001, Round 2 Groundwater
Well Depth. 6 94	Project #: AFC001-28CE Date: 4/6/01 Time:/2/5
DTW (ft) 4 52 DTP (ft).	Courier: FedEx UPS Hand Other
MP Ht. Above/Below Ground Surface: -0,122	Sampling Method: Bris Low Flow
Condition of Bottom of Well: 5.44	Type of Pump: Bl. Ide Pump
Screen Interval (ft): (1.99 - 6.99)	Weather sunclear, overcast/rain, wind direction, ambient temperature):
Well Diameter (in): 2	5/50- 85-2
Placement of Pump (ft): 5.73	

#### Field Parameters

• • • • • • • • • • • • • • • • • • • •	er than	Percent	the ances		1. M.B. 1	क्षानिहरू स्वकृत	, leading	And it	a session	Type Riv , with the will
1215	Sue below		0_	45	17.8	L _		5.46	187	
1224	1	09	1.40	6.7	20.5	418	226	4.28	14.5	
17.25		.05	1.85	6.6	21.7	435	728	4.29	10.7	
[2.34	T	.09_	2.3	6.6	21.9	426	231	4.25	5.7	
12.75		.09	2.75	6.6	707	428	235	4.17	46	
1244		٠٥٦	3.2	66	19.8	418	237	411	5.1	
1244	Ţ- <b>-</b>	٥٩	365	6.6	19.5	420	239	4.08	5.9	
1254	1	.05	4.1	66	199	419	243	4.08	4.4	
1259	7	ellec	5	7 mps	2					
			<u> </u>		·					
		L								ļ
			<u> </u>						L	<u> </u>

#### Observations

	Clear Other		_		C/ca.					
Odor:	None Low	Medium	High	Very Stron	g H2S	Fuel-like	None			
Notes.	Depti.	of to	1	0,00	ibn-e	water	table	level.	<del></del>	
		0	- 6 7	, _ , _						
	····									
<del> </del>										
Signed/	Sampler(s)	<del></del>	Kat "	Dun		TAS.	12	· 2~	کـ	



LUCATION.	NAS Fort	North JRB, TX	PROJECT NAME: 1	PROJECT NAME: Frase 11 Kirl F1-001, Round 2 Groundwat					
SITE:	AOC 19		PROJECT NO:	PROJECT NO: AFC001-26CE					
		SAN	1PLE INFORMATION						
SAMPLE ID	WEGLTAG	52WG02	DATE: 4/6/0	I TIME:	1259				
MATRIX TYPE	WO		ENTER SAMPLE N	ENTER SAMPLE NUMBERS FOR QC SAMPLES/					
SAMPLING MET	HOD: BP			BLANKS ASSOCIATED WITH THIS SAMPLE:					
LOT CONTROL	1 5 0	LA	MATRIX SPIKE (N	(5)					
Ī		- Trip Blank # - Cooler #)	MATRIX SPIKE D	UP (SD):					
CHAIN-OF-CUST	ODY #:		HELD DUP (FD)						
			AMBIENT BLANK						
SAMPLE BEG. DPE	「H (FT): ~今		Ĭ	NK (EB): EBOY	060]				
SAMPLE END OPET	'H (FT) ~A				0001				
GRAB COM			FRIP BLANK (TB):	TROY0601	~				
	CONTAINER PRESERVATIVE		ANALYTICAL METHOD	AN	ALYSIS				
SIZE/TYPE #	<del></del>	PARATION 4C HCI pH < 2	SW8260B	<del> </del>	TCE				
	1	,							
		NOTA	BLE OBSERVATIONS						
PID READIN	GS	SAMP	LE CHARACTERISTICS	M	ISCELLANEOUS				
lsi 5,4		DLOR Clear							
2nd		OOR ~ FR.							
pH 6.4			ved Ozygen 4. 08 (mg/L)	Specific Combustivity	415 (umbas/cm)				
	•		240 (mv) Turbidity	•	-i i (artificacit)				
Iron(in	EL) Oxida		_ <del></del>						
			ERAL INFORMATION	· r ·					
WEATHER: SUN/O	LEAR	OVERCAST/RAIN	WIND DIRECTION	SE AMBIENT TE	emperature Bor				
SHIPMENT VIA: F	EDEXx_	HAND DELIVER	COURIER OTHER						
SHIPPED TO STL	- Chicago								
COMMENTS:									
SAMPLER	2. Donah.	<u>c</u>	OBSERVER.	K. Draw					
MAT	RIK TYPE CO	DES	5A	MPLING METHOD CO	DUES				
DC = DRILL CUTTING	S	SL=SLUDGE	B=BAILER	G=G	RAP				
wg=ground wati		SO=SOIL	BP=BLADDER PUMP		HAND AUGER				
LH=HAZARDOUS LI	•		BR=BRASS RING		OLLOW STEM AUGER				
SH=HAZRDOUS SOL	ID WASTE	WS=SURFACE WATER	,		HYDRO PUNCH				
SE = SEDIMENT		SW=SWAB/WIPE	C=CONTINUOUS FLIG		iplit spoon				
			DT-DRIVEN TUBE		DBMERSIBLE PUMP				

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CT - A

# HYDRO Geologic

# FIELD SAMPLING REPORT

LOCATION: NAS Fort Worth JRB, Texas	PROJECT NAME: AP	rii 2001 Semi-Annuai Sampiing				
SITE:	PROJECT NAME: AF	FC001-33DAA				
S	AMPLE INFORMATION					
SAMPLE ID WHGLTA004WG14	DATE: 3/1/	/TIME: /450				
MATRIX TYPE: WG	ENTER SAMPLE N	ENTER SAMPLE NUMBERS FOR QC SAMPLES/				
SAMPLING METHOD. Low Flow	BLANKS ASSOCIA	TED WITH THIS SAMPLE:				
LOT CONTROL #: 0 0 1 A	MATRIX SPIKE (M	(S)				
(Ambient Blank # . Equip nent Blank # . Trip Blank # . Cool		UP (SD)				
CHAIN-OF-CUSTODY #.	FIELD DUP (FD)					
	į	(AB)				
SAMPLE BEG DEPTH (FT). NA		NK (EB)				
SAMPLE END DEPTH (FT) NA		TR032601				
GRAB(X) COMPOSITE()	IRIP DLANK (IB)					
CONTAINER PRESERVATIVE/	ANALYTICAL	ANALYSIS				
SIZE/TYPE # PREPARATION	METHOD	VIVOTESIS				
40 mL VOA 3 Cool to 4C/HCl to pH<2	SW8260B	VOCs				
NO	TABLE OBSERVATIONS					
	AMPLE CHARACTERISTICS	MISCELLANEOUS				
Ist 5/ COLOR: Clear						
2nd ODOR:						
OTHER:						
pH 6.9 Temperature 19.7(C)	Dissolved Oxygen 2 - • (mg/L	.) Conductivity <u>\$ / 2</u> (umhos/cm)				
Iron NA (mg/L) Oxidation/Reduction Por	ential 265 (mv) Turbidity	7.4 (NTU)				
G	ENERAL INFORMATION					
WEATHER SUN/CLEAR OVERCAST/F	AIN WIND DIRECTION	NINE AMBIENT TEMPERATURE				
SHIPMENT VIA PEDEX HAND DELIVER		( Table 1				
SHIPPED TO STL - Chicago						
COMMENTS.						
SAMPLER 17 Karst	OBSERVER: Z-	Durau				
'						
MATRIX TYPE CODES		ipling method codes o=grae				
DC=DRILL CUTTINGS SL=SLUDG WG=GROUND WATER SO=SOIL	B=BAILER BP=BLADDER PUMP	Ha=Hand Auger				
LH=HAZARDOUS LII)UID WAST GS=SOIL GAS	BR=BRASS RINO	H=HOLLOW S [EM AUGER				
SH=HAZARDOUS SOLID WAST WS=SURFACE WA						
SE=SEDIMENT SW=SWAB/WIPE	C=CONTINUOUS FLIC					

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#### · GROUNDWATER FIELD SAMPLING DATA SHEET

Well No. WHCLTA004	Location: NAS For Worth JRB, Texas				
Sampler (s) K. Pura-, A. Ka-a+	Project Name: April 2001 Semi-Annual Sampling				
Well Depth:	Project #: AFC001-330AA Date: 7/2 4/0, Time: /408				
DTW (ft): 17.0 DTP (ft): 14.2-	Courier: X FedEx UPS Hand Othe				
MP Hr. Above/Below GS: 0,2	Sampling Method: Low Flow				
Condition of Bottom of Well	Type of Pump: Bladder				
Screen Interval (ft): 13.3 - 23.3	Weather (Un/clea), overcast/rain, wind direction, ambient temperature)				
Well Diameter (in) 2	B/NO 54.				
Placement of Purt p Inlet (ft). 21	7				

#### Field Parameters

Time	Depth to Water (R)	Flow Rate &	Total (Volume	r.pH	Temp.	Cond (dimnos/cal)		DO.	STD.	Type, Size, and in- Agriculat of Sediment Discharged
1414	17.02	150	0	70	11.5	499	24	241	6.9	clen
14/9	_	10-	.45	6.9	19.19	505	265	2.24	68	
1424		100	,95	6.8	19.3	507	265	2,/	6.7	
14 29	17.07	100	1.45	6.8	19.2	507	266	2.05	5.1	
1434	17.01,	100	1,95	6.8	19.2	507	267	2.01	5.5	
1439	17.01.	/=0	2.45	6.8	19.4	509	267	2.0	4.2	
1444	17.02	( * *	2.95	6.8	19.7	5/2	265	2.0	3.4	
1450		Pest	SAG	0/81						
				<u> </u>			<u> </u>			
		<b></b>					ļ. —	<u> </u>		
		-			<del>  -</del>		-	<del> </del>	<del></del>	
		-		ļ	<del>                                     </del>		<del> </del>	<u> </u>		
		<del> </del>			<b> </b>	<del> </del>	-	<del> </del>	<u> </u>	
		<del>                                     </del>		<u> </u>	<del> </del>		-	-	<del></del> -	-
		<u> </u>	<u> </u>	<u> </u>	1	<u> </u>		<u> </u>	<u> </u>	l

#### Observations

Color. Clear Cither (describe)		C	La							
					Very Strong	H2S	Fuel-like	none		
Notes:									 	
					<u>-</u>				 	
					<del></del>	<del></del> -				
									 	_
<del> </del>		_ <del></del>								
Signed	/Sampl	er(s):	- Selen		Vand		V.	+Duse		
5.8.00				<del>ارم رحی</del>	igues-			- June	 	

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LOCATION:	NAS Fort	Worth JRB, TX		PROJECT NAME:	Phase II RF	I FT-001			
SITE	AOC 19			PROJECT NO:	AFC001-26	CE			
-			AMPLE I	NFORMATION					
SAMPLE ID	WIGLTA	101WG0 <b>L</b>		DATE. 4/6	101	TIME: 1000			
MATRIX TYPE:	WG		1	ENTER SAMPLE NUMBERS FOR QC SAMPLES/					
SAMPLING MET	THOD BP			BLANKS ASSOC	IATED WIT	H THIS SAMPLE:			
LOT CONTROL	#: 12 1	/ A		MATRIX SPIKE	(MS):	<del></del>			
i		- Trip Blank # - Cooler #	,	MATRIX SPIKE	DUP (SD).				
CHAIN-OF-CUS	TODY #-	•			· · · · · · · · · · · · · · · · · · ·	06W60Z			
CHAIN-OF-COS						- <del></del>			
SAMPLE BEG DPE	TH (FT) AU	l a		AMBIENT BLAN					
1	1	. 4				B040601			
SAMPLE END OPETH (IT): NA				TRIP BLANK (TB): 78040601					
GRAB (X) CON	APOSITE ( )								
CONTAINER	PRE	SERVATIVE/		NALYTICAL		ANALYSIS			
SIZE/TYPE	k-	EPARATION		METHOD					
40 mL VOA	Cool t	o 4C HCl pH < 2		SW8260B		TCE			
		NOT	ABLE OF	SERVATIONS					
PID READIN	NGS			ACTERISTICS		MISCELLANEÕUS			
100 pan		OLOR CROP			<u> </u>				
and O ppm		oor none							
		THER.		- 00		7/2-12			
						nductivity 424 (umhos/cm)			
Iron(n	ng/L) Oxida	tlon/Reduction Potentia	257.1	(mv) Turbidity_	3.62	(NTU)			
		GE	NERAL IN	FORMATION					
WEATHER SUN	CLEAR	OVERCAST/RAIN	×	WIND DIRECTION	<b>5</b> AM	BIENT TEMPERATURE 75			
		HAND DELIVER							
		HAND BELIVER		JAILA OTH	· N				
SHIPPED TO: STL	C.nicago								
COMMENTS.									
SAMPLER		7. Karst		OBSERVER	J. U	allau			
MAT	RIX TYPE CO	DES		S	AMPLING ME	THOD CODES			
C=DRILL CUTTINGS SL=SLUDGE				B=BAILER		O-GRAB			
WG-GROUND WAT	er	SO=SOIL		BF=BLADDER PUMP		HA≂HAND AUGER			
LH=HAZARDOUS LI	QUID WASTE	GS-SOIL GAS		BR=BRASS RING		H=HOLLOW STEM AUGER			
SR=HAZRDOUS SOL	JD WASTE	WS=SURFACE WATE	R	CS=COMPOSITE SAM	-	HP=HYDRO PUNCH			
SE-SEDIMENT		SW=SWAB/WIPE		C=CONTINUOUS FLIC	GHT AUGER	SS = SPLIT SPOON			
				DT=DRIVEN TUBE		SP = SUBMERSTILE PUMP			

AFCEE FORM SR 11



_		· · · · · · · · · · · · · · · · · · ·						
LOCATION: NAS Fort W	orth JRB, TX	PROJECT NAME. PI	hase II RFI QC					
SITE:		PROJECT NO: A	FC001-2 <del>600</del> % 240E					
	SAMP	LE INFORMATION						
SAMPLE ID THE	DUPOL	DATE: 4/6/	01 TIME 1200 / 1000					
MATRIX TYPE: G-W		ENTER SAMPLE N	IMPERS FOR OC SAMPLES!					
SAMPLING METHOD LUY	J FLAW		ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE.					
LOT CONTROL #: 17 1		MATRIX SPIKE (M	MATRIX SPIKE (MS)					
(Ambient Blank # - Equipment Blank # -		MATRIX SPIKE DU	MATRIX SPIKE DUP (SD)					
CHAIN-OF-CUSTODY #:		FIELD DUP (FD).	WHGLTABOIWGOZ					
	<u> </u>	AMBIENT BLANK (	(AB):					
SAMPLE BEG DPETH (FT)	A	EQUIPMENT BLAN	K (EB) EBOYOGUI					
SAMPLE END OPETH (FT).	A	1	TB 040601					
GRAB COMPOSITE ( )		ואות שבאאת (דם)	IDUIDEO !					
CONTAINER PRESI	ERVATIVE/	ANALYTICAL	ANALYSIS					
SIZE/TYPE # PREF	ARATION	METHOD						
40 mL VOA 3 Coul to 4	HC HCl pH < 2	SW8260B	TCE					
· · · · · · · · · · · · · · · · · · ·	NOTABL	E OBSERVATIONS						
PID READINGS	SAMPLE	CHARACTERISTICS	MISCELLANEOUS					
lst 100 00m Col	OR NICO							
and o pom ODO	DR. DONL							
OTF	<u> </u>							
pH 6.51 Temperature	2026 (C) Disselved	Oxygen <u>0.88</u> (mg/L) .5	Specific Conductivity 429 (umbas/cm)					
Iron NA (mg/L) Oxidatio	n/Reduction Potential	7. (mv) Turbidity 3	.62 (NTU)					
•	GENER/	AL INFORMATION						
WEATHER SUN/CLEAR	OVERCAST/RAIN X	WIND DIRECTION	5 AMBIENT TEMPI RATURE 75°					
SHIPMENT VIA FEDEX	HAND DELIVER	COURIEROTHER_						
SHIPPED TO. STL - Chicago								
COMMENTS								
SAMPLER A. Kars	· <del>+</del>	OBSERVER	J. Wallace					
MATRIX TYPE COD	ES	SAM	PLING METHOD CODES					
OC=DRILL CUTTINGS	SL=SLUDGE	B=BAILER	O=GRAB					
WG=GROUND WATER	SO=SOIL	BP=BLADDER PUMP	HA =HAND AUGER					
H-HAZARDOUS LIQUID WASTE	JS=SOIL GAS	BR=BRASS RING	H=HOLLOW STEM AUGER					
H=HAZRDOUS SOLID WASTE	WS=SURFACE WATER	CS = COMPOSITE SAMPLI	E HP = HYDRO PUNCH					
E=SEDIMENT 3	SW=SWAB/WIPE	C=CONTINUOUS FLIGHT	TAUGER SS=SPLIT SPOON					
		DT-DRIVEN TIME	complementing alima					

AFCEE FORM \$R.11

#### GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: WHGLTA801	Location AOC 19					
Sampler(s). A. Karst J. Wallau	Project Name. Phase II RFI FT-001					
Well Depth: /3.96	Project #: AFC001-25CE Date: 4/6/01 Time: 0926					
DTW (ft): 9.05   DTP (ft). —	Courier: FedEx UPS Hand Other					
MP Ht. Above/Below Ground Surface	Sampling Method: PAY WW FLOW					
Condition of Bottom of Well:	Type of Pump: Bladder					
Screen Interval (ft) (-) 4-14	Weather (sun/clear, overcast/rain, wind direction, ambient temperature)					
Well Diameter (in):	overcast, 5, 75°					
Placement of Pump (ft)/ in(e1)						

#### Field Parameters

et programme Charles	ខេត្តក្រាប្រ	Name of	P bear of the	निक्ता के किस के किस के किस के किस की कि अपने किस की	i ir ii ii	100111	(6):1:	4.	tarre.	Missa Bara, water manifelia. Baran was bakatari wa
j Piloto kompin	$\mathbf{f}_{\mathbf{D}_{E}}$	A 37 4 13		A The Late of the	li Lista II			<u></u>	11, 427-15	· .
0936	*	0.2		6.48	20,06	422	2860	1.00	10.24	<b></b>
0939		0.2	0.6	6.49	20.14	423	280.0	0.97	9.46	
1942		0.2	1.2	6.50	20,05	402	278.1	0.95	7.64	
0945		0.2	1.8	6.49	19.97	421	275.6	0.92	6,01	
0948		0.2		6.49	19.93	421	272.0	0.90	4.71	
0951		0.2	3.0	6,49	19.97	421		0.09		
0954		0.2	3.6	6,50	20.05	422	263.7			
0954		0.2	4.2	6.51	20,26	424	257.1	0.88	3.62	
1000		lect	<del></del> -							
				_						
					-					
		<del> </del>		· · · · · · · · · · · · · · · · · · ·						
				<u> </u>				<del></del>		
							ļ <del>-</del>			
		<u> </u>					<u> </u>			<u> </u>

#### Observations

lor: Clear Other (desconder: None Low M	edium High Very Strong H2S Fuel-like
Carl L man	or top of pump ain flow rate less than 0.2 4min.
though to main	oin tim rate less than 0.2 4min.
<del></del>	
ilgned/Sampler(s):	Malare (Man Last)

BEST AVAILABLE COPY



1200		orth JRB, Texas	PROJECT NAME:	April 2001 Semi-Annual : AFC001-33DAA	3ampling				
		SA	MPLE INFORMATION						
SAMPLE ID	TB049 01		DATE: 44	TIME:	0705				
MATRIX TYPE:	WG		ENTED CAMPI	E NI IMBERGEOR O	C SAMOT ES!				
SAMPLING ME	THOD Low	Flow		ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE:					
LOT CONTROL	# 0 1	I M	MATRIX SPIK	E (MS)					
(Ambient Blank # - Ec	quipment Blank	# - Trip Blank # - Cooler	MATRIX SPIKI	MATRIX SPIKE DUP (SD)					
CHAIN-OF-CUS	TODY#:			D)					
SAMPLE BEG. DEP	TH (FT): N	JA .	1	AMBIENT BLANK (AB) FROLLOW					
SAMPLE END DEPT	THUETE N	A	•	EQUIPMENT BLANK (EB). E8040601					
GRAB(X) C	, -	•	TRIP BLANK (	(B). TB 04060	İ				
CONTAINER	PRES	ERVATIVE/	ANALYTICAL	AN	ALYSIS				
SIZE/TYPE #	PRE	PARATION	METHOD						
40 mL VOA 3	Cool to	IC/HCI to pH<2	\$W8260B	\	POCs				
<del></del>		NOT	ABLE OBSERVATIONS						
PID READIN	GS	SAM	PLE CHARACTERISTICS		SCELLANEOUS				
st		DLOR -							
lna		OOR:	_ <del></del>						
		HER:		7. 0 5 5					
<del>-</del>			issolved Oxygen(m	-					
iron(ı	ng/L) Oxid		tial (my) Turbid	ity(NT	U)				
			ERAL INFORMATION	_					
WEATHER SUN	CI.EAR	OVERCAST/RAI	N WIND DIRECTION	N AMBIEN	TTEMPERATURE				
HIPMENT VIA	EDEXx_	_ HAND DELIVER _	COURIER OT	HER					
SHIPPED TO, STL	-Chicago								
comments. Sampler	J.v	Vallace	OBSERVER:	A. Karst					
MAT	RIX TYPE CO	DES		SAMPLING METHOD CO	DES				
DC=DRILL CUTTIN	_	SL=SLUDG	B=BAILER	G≃G					
VO-GROUND WAT		SO=SOIL	BP=BLADDER PUM	•	HAND AUGER				
.H≈HAZARDOUS L	IQUID WAST	GS=SOIL GAS	BR=BRASS RING		OLLOW STEM AUGER				
H=HAZARDOUS S	OI ID WAST	WS=SURFACE WATE			IYDRO PUNC				
E-SEDIMENT		SW=SWAB/WIPE	C=CONTINUOUS FI		PLIT SPOON UBMERSIBLE PUMP				

AFCEE FORM SR II



TLOCATION.	]	NAS Fort Worth JRB, TX		PROJECT NAME: Phase II RFI QC				
SITE:				PROJECT NO: AFC001-26CE				
			SAMPLE II	NFORMATION				
SAMPLE ID	I	B 040601		DATE. 4/6/	0/	TIME: 1570		
MATRIX TYP	E:	WATER		ENTER SAMPLE NUMBERS FOR QC SAMPLES/				
SAMPLING M	ЕТН	OD: GRAB		BLANKS ASSOCIATED WITH THIS SAMPLE:				
LOT CONTRO	L#:	0111		MATRIX SPIKE (MS).				
		ment Blank # - Trip Blank # - Cooler	r#)	MATRIX SPIKE DUP (SD)				
		DY #:		FIELD DUP (FD)				
				AMBIENT BLANK (	(AB):	- ,		
SAMPLE BEG D	PETH	(FT)· N/A		EQUIPMENT BLAN				
SAMPLE END DI	PETH	(FT) NA	}	TRIP BLANK (TB)				
GRAB X) C	OMP	OSITE ( )		THE BLANK (18)	. <u>.19</u> Q7	0001		
CONTAINER	. 1	PRESERVATIVE/	1 ,	ANALYTICAL		ANALYSIS		
SIZE/TYPE	*	PREPARATION		METHOD				
40 mL VOA	3	Cool to 4C HCl pH < 2		SW8260B		VOCs (App IX)		
1 L Puly	1	Cool to 4C NaOH pH > 9	1	SW6010B	·	Total Metals (App IX)		
1 L Amber	2	Cool to 4C		SW8270C		SVOCs (App IX)		
		NC	TABLE OF	BSERVATIONS				
PID REA	DING	S S.	AMPLE CHAR	ACTERISTICS		MISCELLANEOUS		
lst		COLOR, —						
3md		ODOR -						
		OTHER'	<del></del>	· · · · · · · · · · · · · · · · · · ·				
pH		Temperature(C) Di	ssolved Oxyg	en(mg/L) {	Specific Cond	netivity(umhos/cm)		
iron	_(mg/	L) Oxidation/Reduction Potent	lial	(mv) Turbidity	(	NTU)		
		G	ENERAL I	VFORMATION				
WEATHER, SU	N/CL	EAROVERCAST/RA	ıм <u>×</u>	WIND DIRECTION	S AMBI	ENT TEMPERATURE 80		
SHIPMENT VIA	LED	EXx HAND DELIVER		URIEROTHER				
SHIPPED TO. S	TL.	Chicago						
COMMENTS	<u></u> -							
SAMPLER.		J. Wallace		OBSERVER-	A. Kari	<u> </u>		
	ATR	X TYPE CODES		<del></del>	PLING METH			
DC -DRILL CUTT	INGS	SL = SLUDGE		B=BAILER		G=GRAB		
WG=CROUND W	ATER	SO = SOIL		BP=BLADDER PUMP		HA=HAND AUGLR		
		IID WASTE GS=SOIL GAS		BR=BRASS RING		H=HOLLOW STEM AUGER		
SH≖HAZRDOUS S	OLID	WASTE WS - SURFACE WAT	TER	CS = COMPOSITE SAMPLE	Ε	HP=HYDRO PUNCH		
SE - SEDIMENT		SW=SWAB/WIPE		C=CONTINUOUS FLIGHT	T AUGER	SS = SPLIT SPOON		
				DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP			

AFCEE FORM SR.11



LOCATION:	NAS Fort	Worth JRB, TX		PROJECT NAME: Phase II SI, Round 3				
SITE:	AOC 19			PROJECT NO:	AFC001-26C1	E		
			SAMPLE IN	FORMATION				
SAMPLE ID	WHGLTAG	50-WG03		DATE. 6/5/	2001	TIME: 1000		
MATRIX TYPE.	WG			ENTER SAMPLE NUMBERS FOR QC SAMPLES/				
SAMPLING MET	HOD. BP			BLANKS ASSOCIATED WITH THIS SAMPLE:				
LOT CONTROL #	#: <u>d</u>	<u></u>		MATRIX SPIKE	(MS) WHGLT	4055-W603		
(Ambient Blank # - Eqi	upment Blank #	- Trip Blank # - Cooler	· #)	MATRIX SPIKE	DUP (SD) 100	617A058-W603		
CHAIN-OF-CUST	ODY#:			FIELD DUP (FD	Dufo7	_		
aump				AMBIENT BLA	NK (AB) N/A			
SAMPLE BEG DPET	ا (FT) ا	57		EQUIPMENT B	LANK (EB) EBO	061401		
SAMPLE END DPET	H (FT)		ļ		TBOL 150			
GRAB (X) COM	POSITE ( )		}		(b) (800 (30)			
CONTAINER	PRE	SERVATIVE/		NALYTICAL		ANALYSIS		
SIZE/TYPE #		EPARATION		METHOD				
40 mL VOA 3		Cool to 4C	<u> </u>	SW8260B	i	TCE		
		NO	TABLE OF	SERVATIONS				
PID READIN	GS	S	AMPLE CHAR	ACTERISTICS	<u>_</u>	MISCELLANEOUS		
1st 0.0ppm	С	OLOR						
2nd //	<u> </u>	DOR						
		THER						
pH 629	Temperature	22.05 (C) Di	ssolved Oxyg	en <u>47/</u> (mg/L)	Specific Cond	luctivity 289 (umhos/cm)		
Iron(m	g/L) Oxida	tion/Reduction Potent	nai <u>334./</u>	(mv) Turbidity	2.7	(NTU)		
		G	ENERAL II	VFORMATION				
WEATHER SUN/C	LEAR X	OVERCAST/RA	IN	WIND DIRECTION A	U/A AMB	ient temperature 85 F		
	`	•				<u></u>		
SHIPPED TO. STL		HAND DELIVER		URIER OTH	IEK			
COMMENTS								
<del> </del>								
SAMPLER VDU	wan			OBSERVER M J	NO NO STOY			
	RIX TYPE CO	-			SAMPLING MET	HOD CODES		
DC=DRILL CUTTING		SL=SLUDGE		B=BAILER		G = GRAB		
WG=GROUND WATE		SO=SOIL		BP=BLADDER PUMI	?	HA≠HAND AUGER		
H=HAZARDOUS LIC	-			BR=BRASS RING		H=HOLLOW STEM AUGER		
SH=HAZRDOUS SOLI	D WASTE	WS=SURFACE WA	IER	CS=COMPOSITE SAN		HP=HYDRO PUNCH		
E=SEDIMENT		SW=SWAB/WIPE		C=CONTINUOUS FL	IGHT AUGER	SS=SPLIT SPOON		
				DT=DRIVEN TUBE		SP=SUBMERSIBLE PUMP		

#### GROUNDWATER FIELD SAMPLING DATA SHEET

Well No WHGLTA050	Location: AOC 19					
Sampler(s). 11 Duran, MJohuston	Project Name: Phase II SI, Round 3					
Well Depth: 7,12	Project # AFC001-26CE Date 6/15/0   Time 9/0					
DTW (ft). 6.02 DTP (ft): 1/17	Courier X FedEx UPS Hand Other					
MP Ht. Above/Below Ground Surface: -0,112	Sampling Method: BP					
Condition of Bottom of Well:	Type of Pump 3/adder					
Screen Interval (ft): (2.03 - 7.03)	Weather (sun/clear, overcast/rain, wind direction, ambient temperature)					
Well Diameter (in): 2	Sunny , humid, little to no wind, 80;					
Placement of Pump (ft): 657	70,000 7 1,000 20 1					

#### **Field Parameters**

Time "	Depth to	Flow		pΗ		Cond.	ORP.	, <b>DO</b>		Type, Size, and Amount
	Water	🤊 Rate 🦿	Volume	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	(C)	(umhos/cm)	(mv)	(mg/L):	(NŢŲ)	of Sediment Discharged
,	्र <b>ें(ft)</b>	(L/m) -	(L)	Van ster	- W.	1 m 1 m 1 2 m	* * *	****		
920	6t05	Start	m-D			R		~~		Clear, no odos
725	6.04	0.175	1 -	6.14	21.98	289	340.5	4.67	8.1	
930	6-54	0.175	1,75	(0 19	2195	289	304.2	4.52	6.5	
935	6.04	0-175	di-180	6.21	22.61	289	340.4	4.69	<i>+</i> .3	
440	5.93	2.125	2.8	6.24	22.19	290	339.0	4.66	4./	
945	5.92	02	3.8	6,26	22 19	290	337.2	4.77	4.4	
750	5.93	6.2	4.8	6.27	21.93	289	<i>3</i> <b>3</b> .3	4.65	30	
955	5.93	6.2	5.8	6.29	22 05	289	334./	4.7/	2.7	
1000	Colla	t San	06	,						
				_						
					_			7		
		_								
			1					_		
	L	J			[	!	<u>_</u>			

#### Observations

Color:	Clear	Other (	describe):					 	
Odor:	None	Low	Medium	High	Very Strong	H2S	Fuel-like	 	
Notes:				_		_		 	
		-				_			
	_		_		_				
Signed/	/Sampler	(s): M	20 h	1					
			The	<u> </u>	-			 	



LOCATION-	NAS Fort	Worth JRB, TX		PROJECT NAME: Phase II	SI, Round 3			
SITE:	AOC 19	,		PROJECT NO AFC00				
		S	SAMPLE IN	NFORMATION				
SAMPLE ID	WHGLTA	)51-WG03		DATE: (4/15/01 TIME: 1/05				
MATRIX TYPE:	WG			ENTER SAMPLE NUMBERS FOR QC SAMPLES/				
SAMPLING ME	THOD. BP	<del>-</del>		BLANKS ASSOCIATED V				
LOT CONTROL	#: <u>O</u> <u>L</u>	IA		MATRIX SPIKE (MS) <u>い</u>	46LTA055-W603MS			
(Ambient Blank # - E	quipment Blank #	# - Trip Blank # - Cooler	#)	MATRIX SPIKE DUP (SD)	WH62TA055-W603MD			
CHAIN-OF-CUS	TODY #·			FIELD DUP (FD) DUP (	77			
- and		(		AMBIENT BLANK (AB).	SIA			
SAMPLE BEG DPE	TH (FT) 60	3	ļ	EQUIPMENT BLANK (EB)	EB061501			
SAMPLE END DPE	TH (FT)		ļ	TRIP BLANK (TB) TBO	Ste 180)			
GRAB(∑ COM	MPOSITE ( )			IKIP BLANK (IB) (PORTO)				
CONTAINER	PRE	ESERVATIVE/		NALYTICAL	ANALYSIS			
SIZE/TYPE	# PR	EPARATION						
40 mL VOA	3	Cool to 4C		SW8260B	TCE			
<del>-</del>	<del></del>	NO	TABLE OI	BSERVATIONS	<del></del>			
PID READII	NGS			ACTERISTICS	MISCELLANEOUS			
1st 7.7	C	OLOR						
2nd 0.0	0	DOR						
		THER						
рН 6.44	Temperature	e <u>2367</u> (C) Dis	ssolved Oxyg	en <u>2. / 3</u> (mg/L) Specifi	ic Conductivity 3/3 (umhos/cm)			
Iron(r	ng/L) Oxida	tion/Reduction Potenti	ial <u>307.2</u>	(mv) Turbidity <u>5.4</u>	(NTU)			
		Gl	ENERAL I	NFORMATION				
WEATHER SUN/	CLEAR X	OVERCAST/RAI	N	WIND DIRECTION NAME	ambient temperature <u>88 F</u>			
				URIER OTHER	1			
SHIPPED TO STI		<u>.                                    </u>	<del></del>		_			
COMMENTS								
SAMPLER, <u>KDu</u>	1 an			OBSERVER: MJohns	,לערי			
	TRIX TYPE CO	DES		T SAMPLING	G METHOD CODES			
C=DRILL CUTTING		SL=SLUDGE		B=BAILER	G=GRAB			
VG=GROUND WAT		SO=SOIL		BP=BLADDER PUMP	HA=HAND AUGER			
H=HAZARDOUS L	•			BR=BRASS RING	H=HOLLOW STEM AUGER			
H=HAZRDOUS SOI	-	WS=SURFACE WAT	rer .	CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH			
E=SEDIMENT		SW=SWAB/WIPE		C=CONTINUOUS FLIGHT AUG				
				DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP			

AFCEE FORM SR 11

#### GROUNDWATER FIELD SAMPLING DATA SHEET

Well No WHGLTA051	Location: *AOC 19					
Sampler(s). Koman, MSburston	Project Name Phase II SI, Round 3					
Well Depth: 6 80	Project #: AFC001-26CE Date: 6/15/01 Time: 1015					
DTW (ft). 5.26 DTP (ft): N/A	Courier: X FedEx UPS Hand Other					
MP Ht. Above/Below Ground Surface: -0.071	Sampling Method: BP					
Condition of Bottom of Well: 57/44	Type of Pump: Bladder					
Screen Interval (ft): (1.92 - 6.92)	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):  Sunny, very little beery, humid, high 30's					
Well Diameter (in) 2						
Placement of Pump (ft) 6.03						

#### Field Parameters

				_							
	Time	Depth to	Flow	Total	ρH	Temp.	Cond.	ORP	: DO .		Type, Size, and Amount
		Water	Râte	Volume	**	(C)	(umhos/cm)	(mv)	(mg/L)	·· (NTU)	of Sediment Discharged
		(ft)	(L/m)	. ( <b>Ĺ</b> )	5 (5 mg		* * * * * * * * * * * * * * * * * * *	2	y mas is		The state of the s
	1020	5.10	Start	pump							Cloudy, no oder
	1025	5.35	0.175	0.875	6.67	24.51	141	321.3	6.45	104	Cloudy
	1036	5.37	0.175	1.75	6.67	23.18	/59	325,4	3.06	139	Cloudy
	1035	539	0.175	2.62	10.48	22.94	328	329.8	2.1/	88	Cloudy
	1640	5.35	0.175	340	642	23.12	287	323.7	2.07	29	Cleaning up
	1045	5.32	0.175	4,28	6.42	23.13	299	318.7	2,21	16.4	
Į	1050	5.39	0.175	536	6.41	23.15	305	3161	2.15	9.3	Clean
	1055	5.28	0.175	604	643	2330	3/0	310.3	2.14	66	Clear
	1100	5.28	6.175	6.92	6.44	23.67	3/3	307.2	2.13	5.4	Clean
	1105	Colled	t san	بام			_				
1											
-											

#### Observations

Color: (Clear) Odor. (None		High	Very Strong	H2S	Fuel-like	
Notes.						
		-				
_				_		
	<del></del>					
<u> </u>						



LOCATION:	NAS Fort V	Worth JRB, TX		PROJECT NAME:	Phase II SI, F	Round 3			
SITE	AOC 19	,		PROJECT NO:					
			SAMPLE IN	FORMATION					
SAMPLE ID	WHGLTA				101	TIME: /346			
MATRIX TYPE	WG			ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE					
SAMPLING MET	THOD: BP								
LOT CONTROL	#: 1	1 <b>A</b>		MATRIX SPIKE	(MS):				
i i		- Trip Blank # - Cooler	· #)	MATRIX SPIKE	DUP (SD)				
	•		i		»	<del></del>			
CHAIN-OF-CUS	TOD1#:								
SAMPLE BEG DPE	TH (FT)	νĪΑ			NK (AB)				
SAMPLE END DPE		· ·		EQUIPMENT BLANK (EB) <u>E806260</u> ]					
GRAB (X) COM		•		TRIP BLANK (T	TB) <i>7<b>B</b>0</i>	62601			
GRAD (X) CON	irosite ( )								
CONTAINER	PRE	SERVATIVE/	A	NALYTICAL		ANALYSIS			
	- <del></del>	EPARATION		METHOD		TCE			
40 mL VOA 3		Cool to 4C		SW8260B		ICE			
		NO	TABLE OF	SERVATIONS					
PID READIN	1GS	s	AMPLE CHAR	ACTERISTICS		MISCELLANEOUS			
1st NA	C	olor clear			ı				
2nd Nf		DOR none							
/ C:-		THER		<u> </u>		///2 / -1/->			
- <del>- 1</del>						ductivity /42 (umhos/cm)			
Iron NA (n	ng/L) Oxida			(mv) Turbidity_	<u> </u>	(NTU)			
	<b>V</b>			VIFORMATION	£	BIENT TEMPERATURE 90			
						BIENT TEMPERATURE			
		_ HAND DELIVER	COI	JRIEROTH	ER				
SHIPPED TO. STL	Chicago								
COMMENTS:									
SAMPLER	K.D	uran		OBSERVER	J-Wa	llace			
MAT	TRIX TYPE CO	<del> </del>		Ţ	SAMPLING MET	THOD CODES			
DC=DRILL CUTTING	SS	SL=SLUDGE		B=BAILER		G = GRAB			
WG=GROUND WATI	ER	SO=SOIL		BP=BLADDER PUMI	?	HA=HAND AUGER			
LH=HAZARDOUS LI	QUID WASTE	GS=SOIL GAS		BR=BRASS RING		H=HOLLOW STEM AUGER			
SH=HAZRDOUS SOL	ID WASTE	WS=SURFACE WA	TER	CS=COMPOSITE SAI	MPLE	HP=HYDRO PUNCH			
SE=SEDIMENT		SW=SWAB/WIPE		C=CONTINUOUS FL	IGHT AUGER	SS=SPLIT SPOON			
				DT=DRIVEN TUBE		SP=SUBMERSIBLE PUMP			

AFCEE FORM SR 11

#### GROUNDWATER FIELD SAMPLING DATA SHEET

Well No . WHGLTA052	Location AOC 19			
Sampler(s): K. Duran, J. Wallay	Project Name: Phase II SI, Round 3			
Well Depth: 1088	Project #: AFC001-26CE Date: 6/26 0; Time /300			
DTW (ft): 95.25 to DTP (ft):	Courier FedEx UPS Hand Other			
MP Ht. Above/Below Ground Surface: -0.122	Sampling Method: BF LOW FLOW			
Condition of Bottom of Well: firm	Type of Pump: BLADDEL Pump			
Screen Interval (ft): (1.99 - 6.99)	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):			
Well Diameter (in) 2	sunny, 90°, E			
Placement of Pump (ft): 70 p 3.07				

#### Field Parameters

(	Time	Depth to	Flow	Total	pH <sub>3</sub> ;	Temp.	Cond.	ORP.	₽ĎO:	Turb	Type, Size, and Amount
	A DE	Water	Rate	Volume		(C)	(Cond. (umbos/cm)	ORP (mv)	DO (mg/L)	(NTU)	of Sediment Discharged
Į		Water (ft)	((r/w) ;	Total Volume (L)							
	1304	5.11	0.15	0	7.10	2564	139	251	4.07	50.7	
	1309	5.12	0.15	0.75		24.20		279	4.07	37.9	
	1314	5.12	0.15			23.97		285	4.07	22,3	
	13/9	5.12	0.15	2.25	6.83	23.92	136	290	4.05	14.5	
	1324						134	294	4.06	11.6	
	1329	5.12	0.15	3.75	6.86	24.30	137	293	4.06	10.0	
	1334		0.15		6.88		140	290	4.11	6.4	
	1339	5.12	0.15	5.25			141	289	4.11	4.4	
	1344	5.12	0.15	6-00	6.85	25.73	142	288	4.11	4.7	
	1340	CO	lect	Sam	rles						
				1	į						
Γ				_							
Ì				_							
t			<del></del>					-	_		
ŀ											<del></del>
L	l	1				1					

#### Observations

	describe): Clar Medium High Very	Strong H2S Fuel-like	nne	
tes: Inital	DOV prior to	lower pump =		
ned/Sampler(s):	7,,,,,		<del>_</del>	

# 724 330 HYDRO

#### FIELD SAMPLING REPORT

LOCATION N	AS Fort Worth JRB, TX		PROJECT NAME: Pha	se II SI, Ro	und 3		
SITE: A	OC 19		PROJECT NO: AF	C001-26CE			
		SAMPLE II	NFORMATION				
SAMPLE ID W	HGLTA004-WG03		DATE: 6 /15 /20	<i>c)</i> _ T	IME: <u>/340</u>		
MATRIX TYPE W	G		ENTER SAMPLE NU	MBERS FO	R OC SAMPLES/		
SAMPLING METHO	D: BP		BLANKS ASSOCIATI				
LOT CONTROL #: (	DILA		MATRIX SPIKE (MS)	WHELTI	4C55-12603MS		
(Ambient Blank # - Equipm	ent Blank # - Trip Blank # - Coole	τ#)	MATRIX SPIKE DUP	(SD) <u>CO (+6</u>	ECIMOSS-WEOSMI		
CHAIN-OF-CUSTOR	OY #:		FIELD DUP (FD)	UPO7			
			AMBIENT BLANK (A	B) 1 /1			
SAMPLE BEG DPETH (	FT) Dedication		EQUIPMENT BLANK		NA		
SAMPLE END DPETH (	-T)				•		
GRAB (K) COMPO	SITE()		TRIP BLANK (TB).	<u>/ i5 (. ic /-) i</u>			
CONTAINER	PRESERVATIVE/		ANALYTICAL		ANALYSIS		
SIZE/TYPE #	PREPARATION		METHOD	ANALISIS			
40 mL VOA 3	Cool to 4C		SW8260B	TCE			
			BSERVATIONS				
PID READINGS			HARACTERISTICS MISCELLANEOUS				
1st 219.8 r	ODOR 12017						
5, 17/2	OTHER	<u> </u>			<del></del>		
pH 6.39 To	emperature 23 37 (C) D	ussolved Oxyg	gen 2-50 (mg/L) Si	pecific Condu	ctivity <u>296</u> (umhos/cm)		
	Oxidation/Reduction Poter						
			NFORMATION				
WEATHER: SUNCLE	. 1			AMDIE	ent temperature <u>20 ° F</u>		
	/				INT TEMPERATURE /[ · /		
	Xx' HAND DELIVER	cc	OURIEROTHER _	<del></del>			
SHIPPED TO STL - C	hicago						
COMMENTS:							
SAMPLER	ran	4.50	OBSERVER: 177. TC	haster	)		
MATRIX	TYPE CODES		SAME	LING METH	OD CODES		
DC=DRILL CUTTINGS	SL=SLUDGE		B=BAILER		G=GRAB		
WG=GROUND WATER	SO=SOIL		BP=BLADDER PUMP	HA=HAND AUGER			
H=HAZARDOUS LIQUI	D WASTE GS=SOIL GAS		BR=BRASS RING H=HOLLOW STE				
SH=HAZRDOUS SOLID V	VASTE WS=SURFACE WA	ATER	CS=COMPOSITE SAMPLE HP=HYDRO PUNCH				
SE=SEDIMENT	SW = SWAB/WIPE		C=CONTINUOUS FLIGHT	AUGER	SS=SPLIT SPOON		
			DT = DRIVEN TUBE		SP=SUBMERSIBLE PUMP		

AFCEE FORM SR 11

## GROUNDWATER FIELD SAMPLING DATA SHEET

Location. AOC 19					
Project Name: Phase II SI, Round 3					
Project #: AFC001-26CE Date: 6/15/01 Time. 1245					
Courier: FedEx UPS Hand Other					
Sampling Method: BP					
Type of Pump: Dedicated bladder					
Weather (sun/clear, overcast/rain, wind direction, ambient temperature):  Sun, very little breeze,					

#### Field Parameters

Time	Depth to			pH,	Temp.	Cond.	ORP	. DO 🦪	Turb.	Type, Size, and Amount
	Water (ft)	∵Rate: √(L/m) &	Volume (L)		(C)	(ùmhos/cm)	(my)	(mg/L)	Turb.	of Sediment Discharged
1300	<b>∠</b> ¥	Start	pump	l						
1305	*	0.3	1.5	6.49	22.49	296	316.7	2.94	83	
1310		0.2	2.5		22.42	290	324.7		5.2	
1315		0.2	3.5		22.90	293	319.4	2.51	5.3	
1320		0,2	4.5	6.37	22.03	293	314.1		4.2	
1325		0.2	5.5	640	0355	27	306 7	2.67	2.7	
1330		0,2	6.5	6.38	23.24	275	299./	2.53	2,1	
1335		c.2	7.5		13.38	1/2	296.9		2.8	
1340	<b>V</b> _	Coul	ct 53			ELTAC	104/	1603	•	
				7						
			-							
								_		
						_				
			7							

#### **Observations**

Color: Clear Other (describe):	
Odor: None Low Medium High Very Strong H2S Fuel-like	
Notes: * 18.25' top of pump. Couldn't gauge down or to	
Signed/Sampler(s): Mhish	

#### 724 382 HYDRO Geologica

#### FIELD SAMPLING REPORT

LOCATION:	NAS Fort	Worth JRB, TX		PROJECT NAME: Phase II SI, Round 3				
SITE:	AOC 19			PROJECT NO: AFC001-26CE				
		S	AMPLE IN	NFORMATION		<u> </u>		
SAMPLE ID	WHGLTA	801-WG03		DATE: 6/14/01	,	гіме: <u>/6/0</u>		
MATRIX TYPE:	WG			ENTER SAMPLE	NUMBERS FO	OR QC SAMPLES/		
SAMPLING MET	HOD: BP			BLANKS ASSOC		=		
LOT CONTROL #	#: <u>0</u>	4 A		MATRIX SPIKE	(MS) WHELTP	1055-W603MS		
(Ambient Blank # - Eqt	upment Blank #	- Trip Blank # - Cooler #	#)	MATRIX SPIKE	DUP (SD) wH6	LTA 055-0603MD		
CHAIN-OF-CUST	ODY#			FIELD DUP (FD	Dupoz			
num P				AMBIENT BLAI	NK (AB) N/P			
SAMPLE BEG DPET	TH (FT) 8.5	4		EQUIPMENT BI	LANK (EB) EBC	061401		
SAMPLE END DPET	H (FT)			TRIP BLANK (T	B) TB061401	<del>-</del>		
GRAB(1) COM	POSITE ( )		į	•	/ <u></u>	<del>-</del>		
CONTAINER	PRE	SERVATIVE/		NALYTICAL		ANALYSIS		
SIZE/TYPE #	<del></del>	EPARATION		METHOD				
40 mL VOA 3	<u> </u>	Cool to 4C		SW8260B		TCE		
		NO	TABLE OF	BSERVATIONS				
PID READIN	GS		MPLE CHAR	HARACTERISTICS MISCELLANEOUS				
1st 3.7 ppm	C	OLOR GICAY			·			
2nd O.O ppm		DOR non						
<del>-                                    </del>	0	THER						
pH <u>10.40</u>	Temperature	24,59(C) Dis	solved Oxygo	en <u>2. // (</u> mg/L)	Specific Cond	uctivity 30/ (umhos/cm)		
Iron(m	g/L) Oxida	tion/Reduction Potentia	al <u>/90. /</u>	(mv) Turbidity_	5,7	NTU)		
	,	GE	ENERAL IN	NFORMATION				
WEATHER (SUN)C	LEAR	OVERCAST/RAIN	N N	WIND DIRECTION	S/SE AMBI	ent temperature 95 F		
	,	HAND DELIVER _		_				
SHIPPED TO STL				<del></del>				
COMMENTS								
SAMPLER KDW	an			OBSERVER M JO	hnston			
	RIX TYPE CO	DEC				IOD CODES		
DC=DRILL CUTTING		SL=SLUDGE		SAMPLING ME		G=GRAB		
WG=GROUND WATER SO=SOIL				B=BAILER BP=BLADDER PUMP		HA=HAND AUGER		
H=HAZARDOUS LIC				BR=BRASS RING	H=HOLLOW STEM AUGER			
H=HAZRDOUS SOLI		WS=SURFACE WAT	ER	CS=COMPOSITE SAN	MPLE	HP=HYDRO PUNCH		
E=SEDIMENT		SW=SWAB/WIPE		C=CONTINUOUS FLI		SS=SPLIT SPOON		
				DT=DRIVEN TUBE SP=SUBMERSIBLE P				



		· · · · · · · · · · · · · · · · · · ·	
LOCATION:	N	IAS Fort Worth JRB, TX	PROJECT NAME: Phase II SI, Round 3
SITE:	A	OC 19	PROJECT NO: AFC001-26CE
			SAMPLE INFORMATION
SAMPLE ID	V	HGLTA801 DUVC7	DATE: 6/14/0/ TIME 1200
MATRIX TYPE:	: V	/G	ENTER SAMPLE NUMBERS FOR QC SAMPLES/
SAMPLING ME	THO	DD: BP	BLANKS ASSOCIATED WITH THIS SAMPLE:
LOT CONTROL	#:	0 1 1 19	MATRIX SPIKE (MS): UIHE LTH OST - WEO 3 MS
	-	nent Blank # - Trip Blank # - Coole	MATRIX SPIKE DUP (SD) WH6L7ACSS - W603MD
CHAIN-OF-CUS	TO	OY #.	FIELD DUP (FD). (UHICLAH) 2016 (5
			AMBIENT BLANK (AB) N/A
SAMPLE BEG OPE	ETH	(FT) NTAY 8.54	EQUIPMENT BLANK (EB) EBOG 1401
SAMPLE END DPE	ETH (	FT)	TRIP BLANK (TB) 6306/4/01
GRAB (X) COI	MP(	OSITE ( )	TRIP BLANK (IB) 2300/-10.
CONTAINER PRESERVATIVE/		PRESERVATIVE/	ANALYTICAL ANALYSIS
SIZE/TYPE	#	PREPARATION	METHOD
40 mL VOA	3	Cool to 4C	SW8260B TCE
		N	OTABLE OBSERVATIONS

	N	OTABLE OBSERVATIONS	
PID READINGS	<u> </u>	SAMPLE CHARACTERISTICS	MISCELLANEOUS
3.7	OLOR clear		
<u> </u>	DOR HON		
0.	THER		
pH 6,40 Temperature	24.57 (C)	Dissolved Oxygen <u>2.10</u> (mg/L) S <sub>I</sub>	pecific Conductivity 30/ (umhos/cm)
Iron(mg/L) Oxida	tion/Reduction Pote	ntial <u>190. /</u> (mv) Turbidity <u>5</u> .	<u> </u>
	1	GENERAL INFORMATION	
WEATHER SUNCLEAR	OVERCAST/R	AIN WIND DIRECTION <u>S/S</u> ,	$\mathcal{E}$ ambient temperature $95\mathcal{F}$
SHIPMENT VIA: FEDEXx	HAND DELIVE	COURIER OTHER	
SHIPPED TO: STL - Chicago			
COMMENTS:			
SAMPLER Kouran		OBSERVER. M. John	oston
MATRIX TYPE CO	DES	SAMF	LING METHOD CODES
DC=DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G=GRAB
WG=GROUND WATER	SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS	BR=BRASS RING	H=HOLLOW STEM AUGER
SH=HAZRDOUS SOLID WASTE	WS=SURFACE W	ATER CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
SE=SEDIMENT	SW=SWAB/WIPE	C=CONTINUOUS FLIGHT	AUGER SS=SPLIT SPOON
		DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

AFCEE FORM SR.11

#### GROUNDWATER FIELD SAMPLING DATA SHEET

Well No WHGLTA801	Location: AOC 19				
Sampler(s) Koman Mohnstian	Project Name: Phase II SI, Round 3				
Well Depth. 13.94	Project #: AFC001-26CE Date: 6/14/01 Time: 1500				
DTW (ft): 9.13 DTP (ft): N/A	Courier. X FedEx UPS Hand Other				
MP Ht. Above/Below Ground Surface:	Sampling Method: BP				
Condition of Bottom of Well: 6000	Type of Pump. Bladder				
Screen Interval (ft): (-)	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):				
Well Diameter (in): 2	Sun, windy (s/SE), 96 F				
Placement of Pump (ft): 5.54					

#### **Field Parameters**

							-			
Time		Flow	*Total	pH	-Temp: -	Cond.	ORP	10.3	Turb.	Type, Size, and Amount
	Water	Rate		4	(C)-	(umhos/cm)	(mv)	1 ( ~ ~ ~ )	(NTU)	of Sediment Discharged
***	(ft)	· (1./111) ¿	***, ( <b>[</b> r);	· · · · · · · · · · · · · · · · · · ·	\$ 100 0	*************	4 4		, , , ,	
1520	8.90	Start	pump						240	
1525	8.86	0.24	1.2	6.56	25.61	310	163.7	5.44	23470	
1530	8.85	0.175	8.08	6.36	25.17	305	190 7	3.74	180	
1535	886	0.175	2.96	6.38	25.28	305	189.9	2.85	68	
1540	8.87	0.175	L .	6.40	25 28	306	190.8	2.34	29	
1545	8.87	0.175	4.72	6.41	25.62	3 <u>0</u> 7	1896	2.16	17.2	
1550	8.87	0.175	5.60	6.42	25.91	309	1871	2.15	10.4	
1555	3.36	a o	6.60	6.49	24.62	314	187.8	2.32	78	Stop purp Change
1600	8.86	0.2	7.60	6.40	24.44	300	192.2	2,22	5.9	
1005	8.84	0,2	8.60	6.40	24.59	30/	190.1	2.10	5.7	
1610	Colle	ct say	nole	(WH6 LT	A801-4	1603 and	Dupo	7)		
	_									
			_					_		
		-		_	_		1			1
				_	_					
1							1			

#### Observations

Color: Clear' Other (describe):	
Odor: None Low Medium High Very Strong H2S Fuel-lik	ke
Notes: There was 4" Standing water in	
<del></del>	
igned/Sampler(s): Mohnston	
	<del></del>



LOCATION.	NAS Fort	Worth JRB, TX		PROJECT NAME:	RFI Landfills	Investegation
SITE:	SWMU 17	/ACC 19		PROJECT NO:	AFC001-33CB	ic lacce
			SAMPLE IN	FORMATION		
SAMPLE ID	TB0615-C	1		DATE: 6 //5	701 -	пме: 730
MATRIX TYPE.	N -			ENTER SAMPLE	NUMBERS FO	OR QC SAMPLES/
SAMPLING METH	IOD: 6			BLANKS ASSOC		=
LOT CONTROL #:	<u> </u>	L12:		MATRIX SPIKE	(MS)	
(Ambient Blank # - Equip	pment Blank #	- Trip Blank # - Cooler	#)	MATRIX SPIKE	DUP (SD)	
CHAIN-OF-CUSTO	DDY #·			FIELD DUP (FD	3)	_
		^		AMBIENT BLAT	NK (AB)/_	7
SAMPLE BEG DPETH	1(FT) N	H		EQUIPMENT BI	LANK (EB) EBC	61501
SAMPLE END DPETH	(FT)				.B)	
GRAB (☆ COMP	OSITE ( )			220000		<del></del>
CONTAINER	PRE	SERVATIVE/		NALYTICAL	<u> </u>	ANALYSIS
SIZE/TYPE #		EPARATION		METHOD		
1 L Amber 10		Cool to 4C Ht L	5000	72603	BIE	X + 1C 6-
		NO.	TABLE OF	SERVATIONS		
PID READING	<u> </u>			ACTERISTICS		MISCELLANEOUS
NIA		OLOR	, iiii, EE 0, ii, ii c			
2nd	.0	DOR	_			
	0	THER.			_	
pH	Temperature	(C) Di	ssolved Oxyge	en(mg/L)	Specific Cond	uctivity(umhos/cm)
Iron(mg/	/L) Oxida	tion/Reduction Potent	ial	(mv) Turbidity_	(	NTU)
· · · · · · · · · · · · · · · · · · ·				FORMATION		_
weather (sun/cl	ear <u>X</u>	OVERCAST/RA	IN	WIND DIRECTION Z	<u>~///</u> AMBI	ENT TEMPERATURE 23/F
SHIPMENT VIA FEI	, ,					•
SHIPPED TO- STL -	Chicago					
COMMENTS:						
SAMPLER: <u>KDi</u>	wan			OBSERVER///	topish	
MATR	IX TYPE CO	DES		1	SAMPLING METH	HOD CODES
DC=DRILL CUTTINGS		SL=SLUDGE		B=BAILER		G=GRAB
WG=GROUND WATER		SO≃SOIL		BP=BLADDER PUMP	P	HA=HAND AUGER
LH=HAZARDOUS LIQI	JID WASTE	GS=SOIL GAS		BR=BRASS RING		H=HOLLOW STEM AUGER
SH=HAZRDOUS SOLID	WASTE	WS=SURFACE WA	TER	CS=COMPOSITE SAN	MPLE	HP=HYDRO PUNCH
SE=SEDIMENT		SW=SWAB/WIPE		C=CONTINUOUS FL	IGHT AUGER	SS=SPLIT SPOON
				DT=DRIVEN TUBE		SP=SUBMERSIBLE PUMP



1												
LOCATION N.	AS Fort Wor	th JRB, TX		PROJECT NAME:	RFI Landfills	Investegation						
SITE. SV	VMU 17 //	16619		PROJECT NO:	AFC001-33CE	BC /2006						
			SAMPLE II	NFORMATION								
SAMPLE ID E	B0615@1			DATE: (2/15/	01	гіме. 1415						
MATRIX TYPE. W	!			ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE:								
SAMPLING METHO	D: <u>C</u> .											
LOT CONTROL #		17		MATRIX SPIKE	(MS)							
(Ambient Blank # - Equipm	·		: #)	MATRIX SPIKE	DUP (SD)							
CHAIN-OF-CUSTOD		-			)							
	π			· AMBIENT BLA!		_  -						
SAMPLE BEG DPETH (F	TD KiR											
SAMPLE END DPETH (F	· ·				.ANK (EB)							
GRAB () COMPO				TRIP BLANK (T	B) <u>7306/5</u> 7	<b>⊄</b> /						
CONTAINER	PRESER	VATIVE/	<u> </u>	ANALYTICAL		ANALYSIS						
SIZE/TYPE #		RATION		METHOD								
1 L Amber 10	Cool	10 4C FICE	Suza	<u>eeB</u>	I BTEX	+ TC=						
_	<u>-</u>	NO	TABLE OF	BSERVATIONS								
PID READINGS	<del>_</del>			RACTERISTICS		MISCELLANEOUS						
lst Li /19"	COLO	R	_									
2nd	ODOF			_								
	OTHE											
						uctivity(umhos/cm)						
Iron(mg/L)	Oxidation/	Reduction Potent	ial	(mv) Turbidity_	(	NTU)						
		$\mathbf{G}$	ENERAL II	NFORMATION								
WEATHER SUN/CLEA	.R	OVERCAST/RAI	IN	WIND DIRECTION _	AMBI	ENT TEMPERATURE						
SHIPMENT VIA FEDEX	C x L	IAND DELIVER	со	URIER OTHI	ER							
SHIPPED TO STL - CI		*										
COMMENTS:												
SAMPLER,				OBSERVER								
	TYPE CODES			т———	AMPLING METH	IOD CODES						
OC=DRILL CUTTINGS	SL	= SLUDGE		B=BAILER		G=GRAB						
VG=GROUND WATER	SO	=SOIL		BP=BLADDER PUMP		HA=HAND AUGER						
.H=HAZARDOUS LIQUID	WASTE GS	= SOIL GAS		BR=BRASS RING		H=HOLLOW STEM AUGER						
H=HAZRDOUS SOLID W	ASTE WS	=SURFACE WAT	ΓER	CS=COMPOSITE SAM	!PLE	HP=HYDRO PUNCH						
E=SED!MENT	SW	=SWAB/WIPE		C=CONTINUOUS FLIC	GHT AUGER	SS=SPLIT SPOON						
				DT=DRIVEN TUBE		SP=SUBMERSIBLE PUMP						

**CHAINS OF CUSTODY** 

<u> 388</u> Res. Cl. Check ok ž Preserv. Indicated STL Chicago Chain of Custody CHI.22-09-231/A-5/99 Samples Sealed Samples Intact Additional Analyses / Remarks No COC not present Hand Delivered Yes No Yes No Sample Labels and COC Agree of Cooler Yes Shaded Areas For Internal L Within Hold Time Yes No NA ပ Package Sealed Received on toe Date Received Lab Lot# DATE DATE Bill of Lading. Yes No Temperature pH Check ok Yes No Yes No Courier. Yes \*Hold additional COMPANY COMPANY s association for COC F Quote ASCC01-32 いたもの COMMENTS 1 RECEIVED BY RECEIVED BY 250U (8860B) Vem Hom 20170 III To: Intact Address Phone Fax 8 3 3 (1545/81164) SYOCS MEMORY HA NaOH, Cool to 4°
NaOH/Zn Acetate, Cool to 4°
Cool to 4° TWE SO Preservative Key Campahal, com Fax 703 - 471-4160 70H H2SO4, Cool to 4° HNO3, Cool to 4° HCi Cool to 4° Refrg # Comp/Grab #/ Cont Valume P Preserv ٥ 900 800 Phone 703-474-545 5-17-00 1515 1510 Time Sampling Juc Fo Container Key VOA Vial Sterlie Plastic Amber Glass Widemouth Glass Date Report To: 750° 1-760 Company 2 Contact Address E-Mail Fax: Project Number Hard Copy Date Required BHSLAUCIGOI - US BH6 LAOC 1901-02 BHGLADCIGOI - DI Signature 18051200 Sample ID Sifet-Action Matrix Key
SE = Sediment
SO = Sold
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe Client Tr XOS Chicago Laboratory Project Name: Committed To Your Success University Park, IL 60466 Phone; 708-534-5200 Fax 708-534-5211 Project Location. 14 2417 Bond Street W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
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Contact Chr.	Company AND CO	Phone (703) 4	Fax Commo(0)	1,000	} }	1-26CC	, , , , , , , , , , , , , , , , , , ,		Sampling Date Time	5/1-3/c dBc5	1.136	-		1416		1515		2 / 5/0	3 1 1530	1 1630		101	DATE -	Container Key Plastic YOA Vial Sterile Plastic Amber Glass Videmouth Glass
	0 ₹	1 &	·	Signature.	1	7	7	- 1	Client Sample ID	BHG-1801-01	SHOCADC 1801-02	BHG-L'ACC 1801-03	BHC-LACCISOS-0	8+1C-LACCIR 02-02	-LAC(80223	PO	BHGLACK803-01	-LAK 1803-02	SHC-LACKRU3-03	1805		COMPANY CO	CÓMPANY C	Key SE = Sediment SO = Solid DS = Drum Solid DL = Drum Liquid A L = Leachate SO = Solid WI = Witee
	Committed To Your Success	Chicago Laboratory 2417 Bond Street	University Park, IL 60466 Phone: 708-534-5200 Fax 708-534-5211	Sampler Name		2026 Propal RIT	Cigit County Corty	H	Laboratory ID MS-MS	BHG	75H8	6 HG	8 M.C.	-0HG	1.0118	DuPo4	BHC	BHCL	8 HC	Pur	*	RELINQUISHED BY	RELINGUISHED BY	WW = Wastewater SE = W = Water. SC = SO = Soil SL = Sudge DL = Sludge DL = OL = OII WI = OL = OII WI = OL = OII WI = OL = OII WI = OL = OII WI = OL = OII WI = OL = OII WI = OII WI = OII WI = OII = OII = OII WI = OII = OII = OII WI = OII  = OII

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390 niv of of A Res. Cl<sub>2</sub> Check ok Preserv. Indicated Samples Sealed STL Chicago Chain of Custody: CHr.22-09-231/A-5/9 Samples Intact Yes No Additional Analyses / Remarks COC not present Yes No Hand Delivered Yes No : Yes No Sample Labels and COC Agree of Cooler Shaded Areas For Internal Ç Within Hold Time Received on Ice Package Sealed Date Received Lab Lot# Bill of Lading Temperature PH Check ok Ž Yes No Courrier: \ **X**8 Yes Yes Yes Volume for SPL Par seleptes. FLOCAPORTY IX ISTS COMMENTS: PIECES PUBLY EXTON COMPANY COMPANY Sug-SOUS COFER Ø 3 RECEIVED BY RECEIVED BY ii To: Address Рћопе 462 ñ Š ₫ NaOH, Cool to 4° NaOH/Zn Acetate, Cool to 4° Cool to 4° 830 'n 3 M 'n Preservative Key 1402 H2SO4, Cool to 4\* HNO3, Cool to 4\* HCi, Cool to 4° Volume Refrg # 1 #Cont. Preserv **XintsM** 5/15/wosso 0895 0950 60 4 RD RD 0.35 200 0435 1540 1640 300 1040 1730 Sampling Date Time Container Key Amber Glass Widemouth Glass VOA Vial Sterile Plastic Report To: Hard Copy E-Mail 334 Fax ject Number Ę BHG-LACC1902-02 BHG-LAOCHOS-02 YABAGE BOC MOY- ULMSD 846-140CB04-01 J D BHG-LACIGOR-0 > BACLAC 1904-61 WS BH61A0C1903-0 nature ALLO CICE E8051500 78051500 Sample ID. Client Matrix Key
SE = Sedment
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DS = Solid
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L = Leachate WI = Wipe Dupot Chicago Laboratory Committed To Your Success University Park, 1L 60466 Phone 708-534-5200 126 Phast RELINQUISHED BY 708-534-5211 2417 Bond Street **OSW-SM** St. = Sludge MS = Miscellaneous WW = Wastewater RELINQUISHED BY aboratory = Water ₾ ≓ Sol ō

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Preserv. Indicated Res. Cl. Check ok Samples Sealed Additional Analyses / Remarks Samples Intact Hand Delivered COC not present Yes No Yes No Sample Labels and COC Agree of Cooler Shaded Areas For Internal Use Only ပ္စ Within Hold Time Package Sealed Date Received Received on Ice DATE DATE Bill of Lading Lab Lot # Temperature PH Check ok Yes No Yes No Yes No Yes No Yes No Couner. - SAID EXTER WHITE FOR COMPANY COMPANY -PROJUK IT USTS Quote COMMENTS. RECEIVED BY RECEIVED BY Company Contact Ŧ. ₫ HCI, Cool to 4\*
H2SO4, Cool to 4\*
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SE = Sediment
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STL Chicago Chain of Custody CHI-22-09-231/A-5/88

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SE - Sedment
SO - Solid
DS - Drum Solid
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OL = Oil asw sw RELINQUISHED BY SEVER Sampler Name: 2417 Bond Street WW = Wastewater Project Name: Laboratory STL Chicago <u>e</u>

Samples Intact Samples Sealed Preserv. Indicated Res Cl<sub>2</sub> Check OK Yes No NA COC not present Yes No W W assoc. Wall samples collected Additional Analyses / Remarks Q150 asscrated "15.0.33 0150 0550 central 4/2,0. Assempto -160023101 10155083/2 bximos20 Sample Labels and COC Agree assumed 4/ EBC22101 1018 EBOBRIDA Shaded Areas For Internal Use Only Yes Assumed "/EBOBBOOL Temperature °C of Cooler 293 assec. 4/ EB 022101 2xcc -1 5802810) 13550, 198022101 Yes, No Received on Ice Within Hold Time Package Sealed Yes No NA pH Check OK 724 ŝ Yes No Lab Lot# Yes Quote Contact KIM EXPLS Coans JJITem! Bill To: Address Phone #Cd Fax × Х 火 X Address 1155 Herndon Pley STE 500 4 10 11MF 1840 × X ત Hydro Geologic, Inc. DOLTEMS Henden VA 20170 DON DOW KERENS Chaliem Phone 703 - 478-5186 Fax 303 -471-4180 <u>J</u>r # / Cont. Comp/Grab 2/20/01/1350 W G abilo 1155 W G O 3/20 1830 WG O 2/21/01/1700 W 6 2/21/01/1700 W/G Q Volume 8/31/by 1200 121 G Refrg # Preserv 19/10/18/15: W w 3081 10/25/6 XitteM 3/2/10/1700 W 260/01/0730 W 2/20/10/1620 W DATE 2/2//01 Contact Kim Silves Date Time Sampling AKOO! - 26CE Company Report To: E-Mail Project Number: Hard Copy: WHELT ACSO WEOL FT09-12 BMS01MS FT09-12 BMS01MD Fax: Date Required F709-12BW601 WH6CTAOSis W601 NH61-17-053 W601 Signature WHGLTAOSSUGO COMPANY Sample ID EBORAIO EBOZZOCI Client TBCZZOO DUPO3 nario Project Location: mehnstor University Park, 1L 60466 SEVERN Phone 708-534-5200 708-534-5211 TRENT asm-sm SERVICES SELINQUISHED BY 2417 Bond Street Sampler Name: "hase TI Dona Project Name: Laboratory ID STL Chicago

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COMMENTS Preservative Key

NaOH, Zn, Cool to 4 Cool to 4"

Widemouth Glass

HCI Cool to 4 H2SO4, Cool to 4 HNO3 Cool to 4" NaOH Coot to 4"

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Container Key

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RELINCATION BY

Plastic VOA Vial Sterile Plastic Amber Glass

Matrix Key
SE = Sediment
SO- Solid
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L - Leachate

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pH Check OK Res Cl. Check OK Yes No NA Sample Labels and COC Agree Received on Ice Samples Intact Package Sealed Samples Sealed Within Hold Time: Presery Indicated Yes No COC not present Hand Delivered Assurated with PROLITICE Additional Analyses / Remarks MECON- 320BC Chain of TIME E ME and TROWNOL MY Shaded Areas For Interna DATE DATE Date Received Bill of Lading Courier Lab Lot# withday · 多多 歌舞 金額 68% COMPANY COMPANY 変数を変数 Quote Tim Tring 医医毒性 医二甲基甲基 Phone. RECEIVED BY RECEIVED BY Company COMMENTS Contact Address Bill To: Fax **å**, *`*, 11 5 14 DONE 1 / JULY STA 1.4. 17.77 30.000,000 JME/ Volume See 1 Preservative Key Preserv NaOH/Zn, Cool to 4° HCI, Cool to 4° H2SO4, Cool to 4° TIME 10-101/10/10 1001 HNO3, Cool to 4° NaOH, Cool to 4" 961 11. 347 VISO The Carre Carrent Comp/Grab Ċ Q Cool to 4° . Leer 242 15 3 (4) (5) 1000 Julian 1000 July 1/13 1/14/1/ 120 301 yra-C. Ilinia? -- C E E E E E E E Time Sampling Container Key Widemouth Glass Date Sterile Plastic Report To: Amber Glass Company AFCOULT-SA Address \_\_ Plastic VOA Vial Contact E-Ma⊦l Phone VIHELTA 20 FUSCS ž Project Number Med x 11 Co / Co / C Hard Copy: Fax Date Required Chatter Met **BEST AVA!! AB!** Signature: SE = Sedment Sold Sold DS = Drum Solid DL = Drum Solid DL = Drum Solid COMPANY Sample 1D Client 1 L = Leachate WI = Wipe 11.3 12.37 TOPOT. п О 18.15 **Matrix Key** University Park, It. 60466 Phone 708-534-5200 Phost ST 708-534-5211 TRENT Marcaret GSM-SM SERVICES 2417 Bond Street Sampler Name: = Miscellaneous = Oil Project Location SEVE Laboratory Project Náme; RELINQUISHED BY RELINGÚISHED BY STL Chicago Q. Wastewater が変異なる = Shidge = Sot Lab PM: WW SE SE OL

STL Chicago is a part of Severn Trent Laboratories, Inc.

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STL Chicago is a part of Severn Trent Laboratories, Inc.

NaOH, Cool to 4" NaOH/Zn, Cool to 4"

Cool to 4°

Widemouth Glass Other

Amber Glass

DL = Drum Liquid L = Leachate WI = Wipe 0 =

Miscellaneous

ST1-820P

Hand Delivered

Bill of Lading

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Signature:  Signature:  Fai  Figured  Project Number  Figured  Hard Copy:  Fax:  Client  Sample ID	COMPANY / (X)	COMPANY &	Solid 3 St. Liquid 4 A A are 5 W
SEVER TRENT SERVICES SST. Chicago 2417 Bond Street University Park, it. 60466 Phone, 708-534-5200. Fax 708-534-5200. Fax 708-534-5200. Froject Name:  And The Project Location: And The Project Location	RCLINQUISHED BY	RELINOUISHED BY	WW = Wastewater SE = Sedim W = Water SC = Solid S = Soil DS = Drum SL = Studge DL = Drum MS = Miscellaneous L = Leach OL = Oil Will Wipe A = Air O =

₹ Z Preserv. Indicated Res Cl<sub>2</sub> Check ok CHI 22-09-2311A 5/90 Samples Sealed 5 Additional Analyses / Remarks Samples Intact COC not present Hand Delivered Yes No Yes No Sample Labels and COC Agree of Cooler E WE II.WE Shaded Areas For Internal Use Only ပ Within Hold Time Package Sealed Received on Ice Date Received OATE Bill of Lading Lab Lot # Temperature PH Check ok Yes No ŝ Yes No Courier Yes ≺es Yes BALL SWALL SUOY-64 on AGOOL-246883 CC 399 1. But TB also associated of COMPANY COMPANY Apply hist vece also voctuels 724 Quote KIMEYER 12-5/1 W च्या त्याचा (प्रातिका ५०० च्या त्याचा 7 RECEIVED BY RECEIVED BY 377 Company 1. × 1 ) = Address ~ Contact Phone Fæ ð Y X NaOH, Cool to 4"
NaOH/Zn Acetate, Cool to 4"
Cool to 4" X Address 1155 Herodun Plany STE 900 Preservative Key 20176 jucH2SO4, Cool to 4" HNO3, Cool to 4" TIME 740 × × HCI, Coal to 4° chal com Refrg # Comp/Grab 303-478-5126 Volume I وک Preserv S Ç O #/ Cont C **(**) رع O Hydra Gaican Fix 703-471-418C Terroger NA J) Matrix 3 2 (CH) Kin Evers 1530 177 000 **/55C** 1400 000 Sampling Date Time 900 70-07 んとひとてら DATE DATE Container Key AFGCO1720CC Widemouth Glass 3.40.01 Date VOA Viai Sterile Plastic Amber Glass Company Contact ノディン E-Mail Phone Project/Number Hard Copy Fæ Date Required BHGLACC FCS -03 COMPANY COMPANY PHELACCIAOS-CZ BHELAOCIGOL-67 BHELMC 1907-03 BAGLHOC 1906-03 HELACCHOS-CI Sample ID Key
SE = Sedment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
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S = Soil
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	Contact Kim EVEVS
	Company Hydrofer Lossic, Inc
Committed to rour success	Address 1155 Hernden Play STC-S.
Chicago Laboratory	Hrnden VA 20170
2417 Bond Street	Phone 203-478-5136
University Park, 1L 60466 Phone 708-534-5200	Fax 703-471-418C
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Sampler Name	

Res. Cl<sub>2</sub> Check ok Yes No NA white many (souls) in the later the Presery, indicated Samples Sealed Yes No Ç AS (Swbords), Heatons (Swazeros) Additional Analyses / Remarks Samples Intact COC not present Yes No Sample Labels and COC Agree AUD BSD INTERITION NEEDEN NOR OUT ₹ ပွ Received on Ice Yes No Within Hold Time Package Sealed Yes No Lab Lot# Temperature pH Check ok ž Yes No Arszinc Yes (d, Pb <u>Jofesus</u> \* X Dungems Address Phane **∄** я S Υ-Comp/Grab Goassus Act (Night) to Ver (States Ÿ Refrg # Volume Preserv  $\mathcal{D}$ Ō S #/ Cont. J S D D 1525 S G ſΛ Matrix 15.45 100 355 000 009 009 6-21-01 330 ል ቱ ሌ Sampling Date Time AFCDO1-26C Date Required Hard Copy Project Nymber Ę, X BAGLSWMU 1919-011MS X BHGLSWALL 1919-CHMD BHOLACIACIS-CI BH615wnw1919-03 CHELSWMM19-02 BHGLACCICIC 3-02 BH6LACLIGO5-03 BHELSWIML A19-04 BH615WMW11924-01 Sample ID Client RFI (SI Bonna Ingerso Project Location M Johnston Phas I Laboratory Ω

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SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe EB082101 JS17874 1 Project Location Matrix Key Chicago Laboratory motion University Park, IL 60466 Phone 708-534-5200 Fax 708-534-5211 Summitted To Your Success M Johnston が下っ W = Water
S = Soil
SL = Studge
MS = Miscellaneous
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C 10 C Res. Cl. Check ok Preserv, indicated Samples Sealed Samples Intact Additional Analyses / Remarks COC not present Yes No Sample Labels and COC Agree of Cooler TIME Shaded Areas For Internal Use Only -Kes ¥ ပွ Within Hold Time Package Sealed Received on Ice Date Received CATE DATE Lab Lot# Temperature pH Check ok ŝ Yes No Yes No Yes Yes COMMENTS COMPANY COMPANY Quote 7.17 17,71 RECEIVED BY RECEIVED BY Company Contact ; Address Phone Fax <u></u> H2SO4 Cool to 4\*
HNO3, Cool to 4\*
NaOH, Cool to 4\*
NaOH/Zn Acetate Cool to 4\*
Cool to 4\*  $\times$ ×  $\times$ Preservative Key 1 ine C) HCl, Coal to 4" ر. ريا Comp/Grab Refrg # 9.97 Preserv Volume ن #/ Cont رن ーフィ 3 'n **XnisM** H.A. G. DATE 12-C1 DATE 1) () ( L 5.15 1555 <u>الم</u> <u>الم</u> さって 545 人がいい الارز. الارز 35 ,, ,, ,, 1 シェニーラック 1. 1. Sampling Container Key Date (2) (2) Company ddress ででいる Plastic 7 Contact E-Mail 47.12.L Phone 1 11 1 21 - 12 (7/ Hard Copy Fæ. Fax Project Number Date Required RIGE BUC 1916 - CLIMD DNE LACK 1910 - CAMS Signature 37/C 126- MAN 1/ 36-1 ij DIRECTED TO T SHOLACC MOG-C COMPANY Sample ID 1-46 Fronting BN= 1-966 1910 Client SE Sedment SO = Solid DS = Orum Solid DL = Drum Liquid L = Leachate Wl = Wipe BREL ACC 1910 130173C 万からメンバー Matrix Key Chicago Laboratory Communited To Your Succe. University Park, IL 60466 Phone 708-534-5200 Fax 708-534-5211 产品以用公 ノーンでき W = Water
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**PEST AVAILABLE** 

None

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CHI-22-09-2317A 5/49 724

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Presery, indicated Res. Cl<sub>2</sub> Check ok ž Samples Sealed 6 Samples Intact Additional Analyses / Remarks COC not present STL Chicago Chain of Cus.ody CHI-22-09-231/A Hand Delivered Yes No Yes No Sample Labels and COC Agree of Cooler Shaded Areas For Internal Use Only ×es Yes No NA Ç Within Hold Time Package Sealed Received on fice Date Received DATE DATE Lab Lot# Yes No Bill of Lading Yes No. Temperature PH Check ok Yes .. No Yes No Courier: 2.0.0 PINICA E DELINE OF 世ではくじょ 403 45 A. 267 24.52 <u>3</u> BEST AWAILABLE 724 **分** 3 3 いとうていいことはあ 人で苦めているこ Quote SAME COMMENTS RECEIVED BY RECEIVED BY TOW IT Company: BIII To: Contact Address Phone Ä HNO3, Cool to 4"
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# TAB

APPENDIX G

# APPENDIX G DATA VALIDATION REPORTS

Data Services, Inc.

## METALS USEPA SW846 Methods 6010B/7000 - Level III Review

Site: Naval Air Station Fort Worth - D026CC	SDG #- <u>9A05G259</u>
Client HvdroGeoLogic, Inc.	Date <u>June 28, 2000</u>
Laboratory Severn Trent Laboratories, Chicago, IL	Reviewer Cathy Shelby

Client Sample ID	Laboratory Sample ID	. Matrix
BHGLAOC1901-02	9A05G259-001	Soil
BHGLAOC 1901-03	9A05G259-002	Soil
BHGLAOC1901-01	9A05G259-003	Soil

<u>Holding Times</u> - All samples were extracted and analyzed within 28 days for mercury and 180 days for all other metals as specified in the NAS Fort Worth JRB Basewide Quality Assurance Project Plan (QAPP), March 2000. No qualifications were required

<u>Calibration</u> - All initial and continuing calibration verifications exhibited acceptable %R values. No qualifications were required.

Method Blanks - The water preparation blank PBW, initial and continuing calibration blanks exhibited beryllium and vanadium contamination at 1 5 ug/L and 2.2 ug/L, respectively Beryllium has been qualified (U) in samples BHGLA0C1901-02 and BHGLA0C1901-03 All other associated results are greater than 5X the blank concentration and no further qualifications were required.

The water preparation blank PBW, initial and continuing calibration blanks exhibited negative blank contamination for several compounds. Antimony and silver have been qualified (UJ) in samples BHGLA0C1901-01, BHGLA0C1901-02 and BHGLA0C1901-03. All other associated results are greater than 5X the blank concentration or less than the PQL and no further qualifications were required.

<u>Field and equipment blank</u> - Equipment blank EB051200 (from SDG 9A05G263) exhibited zinc contamination at 11 9 ug/L, however, all associated results are greater than 5X the blank concentration and no qualifications were required

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ICP Interference Check Sample - All % recovery values met the QC acceptance criteria No qualifications were required

LCS - The LCS sample exhibited acceptable %R values No qualifications were required

ICP Serial Dilutions - An ICP serial dilution was not analyzed with this data package

<u>Matrix Spike/Duplicate</u> - A matrix spike/duplicate sample was not analyzed with this data package.

<u>Field Duplicates</u> - Field duplicate samples were not analyzed with this data package.

Graphite Furnace Atomic Absorption (GFAA) Analysis - Samples BHGLAOC1901-02 and BHGLAOC1901-03 exhibited a postdigestion spike for the silver and thallium analyses out of control limits (85-115%) and sample absorbance is less than 50% of spike absorbance. The laboratory flagged these results (W) and the reviewer further qualified these results (J/UJ) unless already qualified due to other problems.

Sample BHGLAOC1901-01 exhibited a postdigestion spike for the selenium and silver analyses out of control limits (85-115%) and sample absorbance is less than 50% of spike absorbance. The laboratory flagged these results (W) and the reviewer further qualified these results (J/UJ) unless already qualified due to other problems.

<u>Compound Quantitation</u> - All results between the MDL and the PQL have been qualified (F)

<u>Comments</u> - The analyses of environmental samples and quality control samples are valid within the constraints identified with the data quality flags as presented in the method blank, GFAA and compound quantitation sections of this report. The NAS Fort Worth JRB 2000 Basewide Quality Assurance Project Plan, March 2000, data validation criteria were used in evaluating the data in this summary report.

<u>Data Validation Summary Table</u> - The following table summarizes all qualifications as described in this data validation summary report.

		ummary Table - 9A05G259	Metals		
Sample No	Compound(s)		orted	Valu	dated
	•	Conc	Qualifier	Conc	Qualifier
BHGLA0C1901-02	Antimony	0.29	Ù	0.29	UJ
	Arsenic	4.4	В	4.4	F
	Bervlitum	0 60	[	0.60	υ
	Cadmium	0 07	В	0 07	F
	Cobalt	5 2	В	5 2	F
	Copper	5 3	В	5 3	F
	Silver	0 01	UW	0 01	UJ
	Thallium	0 20	υw	0 20	UJ
	Tin	16	В	16	F
	Vanadium	29 5	В	29 5	F
	Zinc	21 0	В	210	F
BHGLA0C1901-03	Antimony	0 24	υ	0 24	UJ
	Barium	33 3	В	33 3	F
	Beryllium	0 26	В	0 26	U
	Cadmium	0 13	В	0 13	F
	Chromium	7.4	В	7 4	F
	Cobalt	2 9	В	2 9	F
	Copper	4.2	В	4 2	F
	Nickel	7.6	В	76	F
	Silver	0 01	UW	0 01	UJ
	Thalliuin	0 17	UW	0 17	UJ
	Tin	1.0	В	1.0	F
	Vanadium	22.6	В	22 6	F
	Zinc	98	В	9.8	F
BHGLA0C1901-01	Antimony	031	U	0 31	[J]
	Arsenic	49	В	4 9	F
	Cobalt	46	В	46	F
	Copper	74	В	74	F
	Lead	14 9	В	14 9	F
	Nickel	100	В	100	F
	Selenium	0 22	UW	0 22	UJ
	Silver	0 01	UW	0 01	UJ
	Tin	12	В	12	F
	Vanadium	31 1	В	311	F
	Zinc	22 7	В	22 7	F

ENTRAMENTAL Data Sérvicès, Inc.

#### APPENDIX IX SEMIVOLATILE ORGANIC COMPOUNDS

USEPA SW846 Method 8270C - Level III Review

Site Naval Air Station Fort Worth - DO26CC SDG #: 9A05G259

Client. HvdroGeoLogic. Inc. Date: June 28, 2000

Laboratory. Severn Trent Laboratories, Chicago. IL Reviewer Cathy Shelby

Client Sample ID	Laboratory Sample ID	Matrix
BHCLA0C1901-02	9A05G259-001	Soil
BHCLA0C1901-03	9A05G259-002	Soil
BHCLA0C1901-01	9A05G259-003	Soil

<u>Holding Times</u> - All samples were extracted within 14 days for soil samples and analyzed within 40 days as specified in the NAS Fort Worth JRB 2000 Basewide Quality Assurance Project Plan (QAPP). March 2000. No qualifications were required

<u>GC/MS Tuning</u> - All of the DFTPP tunes in the initial and continuing calibrations met the percent relative abundance criteria. No qualifications were required

Initial Calibration - The initial calibrations analyzed on 03/02/00-05/16/00 exhibited acceptable %RSD and/or correlation coefficients and mean RRF values No qualifications were required.

The initial calibration analyzed on 03/02/00 exhibited high %RSD values for 1,4-naphthoquinone, 4-nitroquinoline-1-oxide and hexachlorophene of 56.3%, 46 7% and 39.3%, respectively. All three compounds have been rejected (R) in samples BHCLAOC1901-01. \*BHCLAOC1901-02, and BHCLAOC1901-03.

Continuing Calibration - The continuing calibration analyzed on 05/30/00 exhibited high %D values for hexachloroethane and 2,4-dinitrophenol of 29 03% and 28.39%, respectively. Both compounds have been rejected (R) in samples BHCLAOC1901-01, BHCLAOC1901-02, and BHCLAOC1901-03.

<u>Surrogates</u> - All samples exhibited acceptable surrogate %R values No qualifications were required.

<u>Laboratory Control Samples</u> - LCS sample SBLKRS exhibited acceptable %R values. No qualifications were required.

MS/MSD - A MS/MSD sample was not analyzed with this data package.

Internal Standard (IS) Area Performance - All internal standards met response and retention time (RT) criteria. No qualifications were required.

<u>Method Blank</u> - Method blank SBLKRS (05/22/00) was free of contamination No qualifications were required

<u>Field, equipment blank</u> - Equipment blank EB051200 (from SDG 9A05G263) exhibited bis(2-ethylhexyl)phthalate contamination at 14 ug/L, however, all associated results are non-detect and no qualifications were required

Field Duplicates - Field duplicate samples were not analyzed with this data package

<u>Tentatively Identified Compounds (TICs)</u> - TICs were not identified in any of the samples.

Compound Quantitation - All results between the MDL and PQF have been qualified (F)

<u>Comments</u> - The analyses of environmental samples and quality control samples are valid within the constraints identified with the data quality flags as presented in the compound quantitation section of this report with the exception of five compounds which were rejected in all samples due to the initial and continuing calibrations. The NAS Fort Worth JRB 2000 Basewide Quality Assurance Project Plan, March 2000, data validation criteria were used in evaluating the data in this summary report

<u>Data Validation Summary Table</u> - The following table summarizes all qualifications as described in this data validation summary report.

	Qualification Summary Table - Semivolatiles SDG 9A05G259								
Sample No	Compound(s)	Rep	orted	Valid	ated				
		Conc	Qualifier	Conc	Qualifier				
BHCLA0C1901-02	Hexachloroethane	380	U	380	R				
	2,4-Dinitrophenol	1900	U	1900	R				
	I.4-Naphthoquinone	1900	U	1900	R				
	4-Nitroquinoline-1-Oxide	1900	U	1900	R				
	Hexachlorophene	5700	U	5700	R				
BHCLA0C1901-03	Hexachloroethane	350	U	350	R				
	2,4-Dinitrophenol	1800	l U .	1800	R				
	1,4-Naphthoquinone	1800	U	1800	R				
	4-Nitroquinoline-1-Oxide	1800	U	1800	R				
	Hexachlorophene	5300	ប	5300	R				
BHCLA0C1901-01	Hexachloroethane	390	U	390	R				
	2,4-Dinitrophenol	2000	U	2000	R				
	Buty Ibenzy Iphthalate	280	J	280	F				
	1,4-Naphthoquinone	2000	U	2000	R				
	4-Nitroquinoline-1-Oxide	2000	U	2000	R				
	Heyachlorophene	5900	U	5900	R				

ENVIRONMENTAL Data Services, Inc.

#### APPENDIX IX VOLATILE ORGANIC COMPOUNDS

USEPA SW846 Method 8260B - Level III Review

Site: Naval Air Station Fort Worth - DO26CC	SDG #: <u>9A05G507</u>
Client HydroGeoLogic, Inc.	Date: July 25, 2000
Laboratory: Severn Trent Laboratories Chicago II	Reviewer: Cathy Shelhy

Client Sample ID	Laboratory Sample ID	Matrix
BHGLAOC1901-01	9A05G507-001	Soil
BHGLAOC1901-02	9A05G507-002	Soil
BHGLAOC1901-03	9A05G507-003	Soil
TB052600	9A05G507-004	Water
EB052600	9A05G507-005	Water

Holding Times - All soil samples were extracted within 48 hours for encore samples and analyzed within 14 days for preserved water and soil samples as specified in the NAS Fort Worth JRB 2000 Basewide Quality Assurance Project Plan (QAPP), March 2000. No qualifications were required.

<u>GC/MS Tuning</u> - All of the BFB tunes in the initial and continuing calibrations met the percent relative abundance criteria. No qualifications were required.

<u>Initial Calibration</u> - The initial calibrations analyzed on 01/12/00-03/27/00, 01/12/00-05/31/00 and 01/14/00-06/04/00 exhibited acceptable %RSD values and/or correlation coefficients. No qualifications were required.

<u>Continuing Calibration</u> - The continuing calibration analyzed on 06/07/00 exhibited high %D values for trichlorofluoromethane of 30.34%. Trichlorofluoromethane has been rejected (R) in samples TB052600 and EB062600.

The continuing calibrations analyzed on 06/06/00 and 06/08/00 exhibited acceptable %D value. No qualifications were required.

<u>Surrogates</u> - All samples exhibited acceptable surrogate %R values. No qualifications were required.

<u>Laboratory Control Samples</u> - LCS samples VBLKYX and VBLKZB exhibited acceptable %R values No qualifications were required.

LCS sample VBLKYZ exhibited a high %R value for tetrachloroethane of 109%. All associated results are non-detect and no qualifications were required.

MS/MSD - MS/MSD sample was not analyzed with this data package

<u>Internal Standard (IS) Area Performance</u> - Sample BHGLAOC1901-01 exhibited low area counts for internal standard 1,4-dichlorobenzene-d4 (IS4). All associated compounds have been qualified (J/UJ) in this sample.

Method Blank - Method blanks VBLKZB (06/06/00), VBLKYX (06/07/00), and VBLKYZ (06/08/00) were free of contamination. No qualifications were required

<u>Trip, field, equipment blank</u> - Trip blank TB052600 was free of contamination. No qualifications were required.

Equipment blank EB052600 exhibited methylene chloride contamination at 2 ug/L. Sample results were non-detect and no qualifications were required.

Field Duplicates - Field duplicate samples were not analyzed with this data package.

Tentatively Identified Compounds - TIC results have been qualified (T)

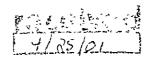
Compound Quantitation - All results between the MDL and the PQL have been qualified (F)

<u>Comments</u> - The analyses of environmental samples and quality control samples are valid within the constraints identified with the data quality flags as presented in the continuing calibration, internal standards, TICs and compound quantitation sections of this report with the exception of several rejections due to the continuing calibration. The NAS Fort Worth JRB 2000 Basewide Quality Assurance Project Plan, March 2000, data validation criteria were used in evaluating the data in this summary report.

Data Validation Summary Table - The following table summarizes all qualifications as described in this data validation summary report.

	Qualification Summary SDG 9A050		les		
Sample No	Compound(s)	Rep	orted	Valid	ated
		Conc	Qualifier	Conc	Qualifier
BHGLAOC1901-01	1,1,2,2-Tetrachloroethane	2	U	2	UJ –
	1,2,3-Trichloropropane	4	U	4	UJ ~
	Pentachloroethane	4	ן ט	4	UJ
	1,2-Dibromo-3-Chloropropane	4	U	4	UJ
BHGLAOC1901-02	Trichloroethene	4	J	4	F
TB052600	Trichlorofluoromethane	0.5	U	0.5	R ~
EB052600	Trichlorofluoromethane	0.5	U	0.5	R





### VOLATILE ORGANIC COMPOUNDS USEPA SW846 Method 8260B - Level III Review

Site: Naval Air Station Fort Worth - DO26CEA	SDG #. <u>9B02G272</u>		
Client HydroGeoLogic, Inc	Date: April 13, 2001		
Laboratory. Seven Trent Laboratories, Chicago, IL	Reviewer Nancy Weaver		

Client Sample ID	Laboratory Sample ID	Matrix
FT09-12CWG01	9B02G272-001	Water
WHGLTA004WG01	9B02G272-002	Water
WHGLTA801WG01	9B02G272-003	Water
WHGLTA051WG01	9B02G272-004	Water
WHGLTA052WG01	9B02G272-005	Water
DUP04	9B02G272-006	Water
EB022201	9B02G272-007	Water
TB022201	9B02G272-008	Water

Holding Times - All samples were analyzed within 14 days for preserved water samples as specified in the NAS Fort Worth JRB 2000 Basewide Quality Assurance Project Plan (QAPP). March 2000. No qualifications were required

GC/MS Tuning - All of the BFB tunes in the initial and continuing calibrations met the percent relative abundance criteria. No qualifications were required.

<u>Initial Calibration</u> - The initial calibrations analyzed on 12/28/00-02/24/01 exhibited acceptable %RSD values and/or correlation coefficients and mean RRF values. No qualifications were required

Continuing Calibration - The continuing calibrations analyzed on 02/28/01. 03/01/01 and 03/04/01 exhibited acceptable %D values. No qualifications were required

<u>Surrogates</u> - All samples exhibited acceptable surrogate %R values. No qualifications were required

<u>Laboratory Control Samples</u> - LCS samples VBLKHQ and VBLKHU exhibited acceptable %R values No qualifications were required

LCS sample VBLKHO exhibited a low %R value for methylene chloride of 74% Methylene chloride has been rejected (R) in associated sample FT09-12CWG01.

MS/MSD - A MS/MSD sample was not analyzed with this data package

Internal Standard (IS) Area Performance - All internal standards met response and retention time (RT) criteria No qualifications were required

Method Blank - Method blanks VBLKHQ (03/01/01) and VBLKHU (03/04.01) were free of contamination No qualifications were required.

Method blank VBLKHO (02/28/01) exhibited 2-hexanone contamination at 2 ug/L, however, the associated results are non-detect and no qualifications were required.

<u>Trip, field, equipment blank</u> - Equipment blank EB022201 was free of contamination. No qualifications were required.

Trip blank TB022201 was free of contamination. No qualifications were required

<u>Field Duplicates</u> - Field duplicate results are summarized in the table below. No qualifications were required.

Compound	WHGLTA801WG01 ug/L	DUP04 ug/L	RPD
Trichloroethene	360	260	32%

<u>Tentatively Identified Compounds</u> - All TICs were qualified (T)

Compound Quantitation - All results between the MDL and the PQL have been qualified (F).

724 417.

<u>Comments</u> - The analyses of environmental samples and quality control samples are valid within the constraints identified with the data quality flags as presented in the TICs and compound quantitation sections of this report with the exception of one compound rejected due to the low LCS recovery. The NAS Basewide Quality Assurance Project Plan. March 2000, data validation criteria were used in evaluating the data in this summary report.

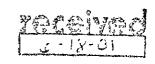
<u>Data Validation Summary Table</u> - The following table summarizes all qualifications as described in this data validation summary report

	Qualification Summ SDG 98	ary Table - Vola 302G2 <b>7</b> 2	atiles			
Sample No	Compound(s)	Compound(s) Reported Validated				
	Conc Qualifier Conc Qualifier					
FT09-12CWG01	Methylene Chloride	0.5	U	0.5	R	
	Benzene 03 J 03 F					
	Chlorobenzene	0 3	J	0 3	F	



WHGLTA052WG02

WHGLTA053WG02



Water

Water

#### APPENDIX IX VOLATILE ORGANIC COMPOUNDS

USEPA SW846 Method 8260B - Level III Review

Site: Naval Air Station Fort Worth - DO26CE		SDG #. <u>202786</u>
Client HydroGeoLogic, Inc.		Date: June 5, 2001
Laboratory Severn Trent Laboratory	atories, Chicago, IL	Reviewer Nancy Weaver
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Client Sample ID	Laboratory Sample ID	Matrix
EB040601	202786-1	Water
EB040601MS	202786-1MS	Water
EB040601MSD	202786-1MSD	Water
WHGLTA801WG02	202786-2	Water
WHGLTA056WG02	202786-3	Water
DUP05WG02	202786-4	Water
DUP06WG02	202786-5	Water
WHGLTA055WG02	202786-6	Water
WHGLTA054WG02	202786-7	Water
WHGLTA050WG02	202786-8	Water

<u>Holding Times</u> - All samples were analyzed within 14 days for preserved water samples as specified in the NAS Fort Worth JRB 2000 Basewide Quality Assurance Project Plan (QAPP). March 2000 No qualifications were required

202786-9

202786-10

GC/MS Tuning - All of the BFB tunes in the initial and continuing calibrations met the percent relative abundance criteria No qualifications were required

Initial Calibration - The initial calibrations analyzed on 03/14/01-04/02/01 exhibited acceptable %RSD values and/or correlation coefficients and mean RRF values No qualifications were required.

Continuing Calibration - The continuing calibrations analyzed on 04/11/01 and 04/12/01 exhibited high %D values for dichlorodifluoromethane of 27.2% and 28 2%, respectively Dichlorodifluoromethane has been rejected (R) in all samples

<u>Surrogates</u> - All samples exhibited acceptable surrogate %R values No qualifications were required

<u>Laboratory Control Samples</u> - LCS samples 15826 and 17551 exhibited low %R values for dichlorodifluoromethane, however, this compound has already been qualified due to the continuing calibration and no further qualifications were required

MS/MSD - MS/MSD sample EB040601 exhibited low MS/MSD %R values for dichlorodifluoromethane of 41%/41% and a high RPD value for styrene of 21%. however, dichlorodifluoromethane is already qualified and styrene is non-detect in this sample and no qualifications were required

Internal Standard (IS) Area Performance - All internal standards met response and retention time (RT) criteria No qualifications were required.

Method Blank - Method blanks 15826 (04/12/01), 15998 (04/16/01) and 17551 (04/11/01) were free of contamination No qualifications were required

<u>Trip. field. equipment blank</u> - Equipment blank EB040601 exhibited methylene chloride contamination at 3 ug/L, however, all associated results are non-detect and no qualifications were required.

<u>Field Duplicates</u> - Field duplicate results are summarized in the tables below. No qualifications were required.

Compound	WHGLTA056WG02 ug/L	DUP05WG02 ug/L	RPD
Dichlorodifluoromethane	1	1	0°,0
Trans-1,2-Dichloroethene	I	1	0%
Cis-1.2-Dichloroethene	27	25	80,0
Trichloroethene	68	67	1%

Compound	WHGLTA801WG02 ug/L	DUP06WG02 ug/L	RPD
Vinyl Chloride	5	6	18%
1,1-Dichloroethene	I	1	0%
Trans-1,2-Dichloroethene	29	29	0%
Cis-1.2-Dichloroethene	200	210	5%
Trichloroethene	150	170	13%

<u>Tentatively Identified Compounds</u> - TICs were not reported with the samples in this data package

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Compound Quantitation - All results between the MDL and the PQL have been qualified (F).

Several samples exhibited compounds which exceeded the linear range of the instrument. The samples were diluted and reanalyzed and the laboratory replaced the original results for these compounds with the dilution results on the Form Is

<u>Comments</u> - The analyses of environmental samples and quality control samples are valid within the constraints identified with the data quality flags as presented in the compound quantitation section of this report with the exception of one compound rejected due to the continuing calibration. The NAS Basewide Quality Assurance Project Plan, March 2000, data validation criteria were used in evaluating the data in this summary report.

<u>Data Validation Summary Table</u> - The following table summarizes all qualifications as described in this data validation summary report.

	Qualification Summa SDG 20	-	atiles				
Sample No	Compound(s)	Reported				Valid	lated
		Conc	Qualifier	Conc	Qualifier		
EB040601	Dichlorodifluoromethane	0.4	U*	0.4	R		
WHGLTA801WG02	Dichlorodifluoromethane	0.4	U*	0 4	R		
WHGLTA056WG02	Dichlorodifluoromethane	1	*	l	R		
DUP05WG02	Dichlorodifluoromethane	1	*	1	R		
DUP06WG02	Dichlorodifluoromethane	0 4	U*	0 4	R		
WHGLTA055WG02	Dichlorodifluoromethane	0 4	U*	0 4	R		
	Trichloroethene	0.5	FA	0.5	F		
	Tetrachloroethene	0.5	FA	0 5	F		
WHGLTA054WG02	Dichlorodifluoromethane	0 4	U*	0 4	R		
WHGLTA050WG02	Dichlorodifluoromethane	0 4	U*	0 4	R		
	l 1-Dichloroethene	0.5	FA	0.5	F		
	Tetrachloroethene	0 4	FA	0 4	F		
WHGL ΓA052WG02	Dichlorodifluoioinethane	0 4	U*	0.4	R		
WHGLTA053WG02	Dichlorodifluoromethane	0 4	U*	0 4	R		

#### Volatile Organic Compounds SW-846 Method 8260B USEPA Level III Review

Site NAS Fort Worth JRB SDG #: 202564

Laboratory: STL-Chicago Date 06 13 01

HydroGeoLogic, Inc. Reviewer Kimberly Evers Project: AFC001-33DAA

Client Sample ID	Laboratory Sample ID	Matrix
WHGLTA004WG14	202564-1	Water
MW-53WG14	202564-2	Water
LF04-02WG14	202564-3	Water
DUP02WG14	202564-4	Water
WHGLTA025WG14	202564-5	Water
LF05-19WG14	202564-6	Water
TB032601	202564-7	Water

Note The only compounds that are being considered are the target compounds reported in this SDG and those relevant compounds used for data validation

<u>Sample Delivery and Condition</u> - The samples arrived at the laboratory in acceptable condition and temperature, and properly preserved. Proper custody was documented. No qualification required

<u>Holding Times</u> - All samples were analyzed within the required holding times for preserved water samples. No qualification required

<u>GC/MS Tuning</u> [Form 5] - The initial calibration and sample analytical sequences were all performed within 12 hours of an acceptable MS tune. No qualification required

Initial Calibration [Form 6] - Two initial calibrations are associated with these samples. Both initial calibrations had acceptable average RRFs for all SPCCs. The mean %RSD for all analytes was below 15%; all compound %RSDs were <30% No Qualification required.

Continuing Calibration [Form 7] - Four continuing calibration verifications (CCVs) are associated with this SDG, a CCV run on 03.30.01(on instrument GCL6), a CCV run on 03.30.01(on instrument GCL3) a CCV run on 03.31.01(on instrument GCL3) and one run on 04.02.01(on instrument GCL3). All SPCCs had CCRFs in control. All CCC %Ds were <20%, all other compound %Ds were in control with the following exceptions:

03.30 01(on instrument GCL6); Dichlorodifluoromethane had a %D of -41 8%. All associated results should be R-qualified.

03 30 01(on instrument GCL6). Chloromethane had a %D of -37 4% All associated results should be R-qualified.

03 30 01(on instrument GCL6) Methylene chloride had a %D of 31 4%. All associated results should be R-qualified.

03 30 01(on instrument GCL6)<sup>7</sup> 1,2-dibromo-3-chloropropane had a %D of 28 1%. All associated results should be R-qualified

04 02 01(on instrument GCL3). Bromomethane had a %D of 25 9% All associated results should be R-qualified

<u>Surrogates</u> [Form 2] -All surrogate recoveries were within established control limits. No data required qualification

Laboratory Control Samples [Form 3] - All %R results for LSC VBLK14720 met established control limits and no qualification is required. All %R results for LSC VBLK14810 met established control limits except for a high %R value for chloromethane of 130% and a low %R for methylene chloride of 67%. All associated results for chloromethane are non-detect and no qualifications are required. All associated results for methylene chloride have already been R qualified due to failure to meet acceptance criteria in the CCV. All %R results for LSC VBLK14702 met established control limits and no qualifications are required. All %R results for LSC VBLK14845 met established control limits and no qualifications are required.

MS/MSD [Form 3] - Sample WHGLTA025WG14 was used for the MS/MSD — All %Rs were in control except for high %R for dichlorodifluoromethane, chloromethane and chloroethane in the MS and MSD. There were no detections of the affected compounds and no qualification necessary. A low %R was reported for methylene chloride, styrene and 1,2,4-trimethylbenzene in the MS and methylene chloride in the MSD. All associated results are non-detect and should be UJ qualified. All RPDs were in control with the exception of bromomethane, styrene and 1,2,4-trimethylbenzene. Styrene and 1,2,4-trimethylbenzene results in the parent sample have already been UJ qualified due to a low %R in the MS. There were no detections of bromomethane reported and no qualification is necessary.

<u>Internal Standard Performance</u> [Form 8] - All internal standards met area and retention time criteria. No qualification necessary

Method Blanks (Form 1) - All method blanks were free from contamination No qualification necessary

Equipment and Trip Blanks [Form 1] - Trip blank TB032601 was free from contamination. No qualification necessary.

<u>Field Duplicates</u> [Form 1] - Field duplicate DUP02WG14 is associated with sample LF04-02WG14 Analyte RPDs meet the acceptance criteria and no qualification is required

Compound Quantitation - Sample WHGLTA004WG14 was analyzed at a 25 fold dilution due to high levels of cis-1,2-dichloroethene and trichloroethene. Sample LF04-02WG14 was analyzed at a 50 fold dilution due to high levels of trans-1,2-dichloroethene and cis-1,2-dichloroethene and a 100 fold dilution due to high levels of trichloroethene. Sample DUP02WG14 was analyzed at a 50 fold dilution due to high levels of trichloroethene and cis-1,2-dichloroethene and a 100 fold dilution due to high levels of trichloroethene. Sample LF05-19WG14 was analyzed at a 100 fold dilution due to high levels of trichloroethene

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Qualification Summary Table

Note - The laboratory provides informational codes in a column in the report page called flags. Those codes are removed and replaced with the appropriate qualifier.

Sample ID	Analyte	Lab Val	Lab Qual	HGL Val	HGL Qual
WHGLTA004WG14	Dichlorodifluoromethane	0 4	U	0.4	R
	Chloromethane	0 4	U	04	R
	Methylene chloride	03	U	03	R
	1,2-dibromo-3-chloropropane	0 5	U	0.5	R
MW-53WG14	No flag changes necessary				
LF04-02WG14	Dichlorodifluoromethane	0.4	U	0.4	R
	Chloromethane	0 4	U	0.4	R
	Methylene chloride	03	U	03	R
	1,2-dibromo-3-chloropropane	0.5	U	0.5	R
DUP02WG14	Dichlorodifluoromethane	0.4	U	0 4	R
	Chloromethane	0.4	U	0.4	R
	Methylene chloride	0 3	U	0 3	R
	1,2-dibromo-3-chloropropane	0 5	U	0 5	R
WHGLTA025WG14	Methylene chloride	0 3	U	0 3	υJ
	Styrene	0 2	U	02	υJ
	1,2,4-trimethylbenzene	0 4	U	0 4	บม
LF05-19WG14	No flag changes necessary				

#### Volatile Organic Compounds SW-846 Method 8260B

USEPA Level III Review

Site NAS Fort Worth JRB

SDG # 202789

Laboratory STL-Chicago

Date 06 19.01

HydroGeoLogic, Inc. Reviewer: Kimberly Evers

Project. AFC001-33DAA

Client Sample ID	Laboratory Sample ID	Lab Batch	Matrix
TB040601	202789-1	18248	Water
WHGLTA603WG14	202789-2	18248	Water
WHGLPU001WG14	202789-3	18248	Water
DUP05WG14	202789-4	18248	Water
WHGLTA051WG14	202789-5	18248	Water
WHGLTA029WG14	202789-6	18248	Water

Note: The only compounds that are being considered are the target compounds reported in this SDG and those relevant compounds used for data validation

<u>Sample Delivery and Condition</u> - The samples arrived at the laboratory in acceptable condition and temperature, and properly preserved Proper custody was documented No qualification required

<u>Holding Times</u> - All samples were analyzed within the required holding times for preserved water samples. No qualification required.

GC/MS Tuning [Form 5] - The initial calibration and sample analytical sequences were all performed within 12 hours of an acceptable MS tune. No qualification required

<u>Initial Calibration</u> [Form 6] - The initial calibration had acceptable average RRFs for all SPCCs—The mean %RSD for all analytes was below 15%, all compound %RSDs were <30%—Compounds with a %RSD <15% are quantified using relative standard deviation—Those with %RSD >15% are quantified using the calibration curve—All calibration curves were evaluated and found to have r²>0 995 and no qualification is necessary.

Continuing Calibration [Form 7] - One continuing calibration verification (CCV),run on 04 16 01, is associated with this SDG. All SPCCs had CCRFs in control. All CCC %Ds were <20%, all other compound %Ds were in control with the following exceptions

04 16 01: Bromomethane had a %D of 42 51%. All associated results should be R qualified

04 16.01. Methylene chloride had a %D of 34.13% All associated results should be R qualified

<u>Surrogates</u> [Form 2] -All surrogate recoveries were within established control limits No data required qualification.

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<u>Laboratory Control Samples</u> [Form 3] - All %R results for LSC VBLK15998BS met established control limits with the exception of a low %R for methylene chloride. All methylene chloride results have already been R qualified due to a failure to meet method specific control limits in the CCV

MS/MSD [Form 3] - Matrix Spike/Matrix Spike Duplicate analyses were not performed in this sample batch. No qualification required

<u>Internal Standard Performance</u> [Form 8] - All internal standards met area and retention time criteria. No qualification necessary.

Method Blanks [Form 1] - The method blank was free from contamination No qualification necessary

<u>Trip Blanks</u> [Form 1] - Trip blank TB040601 was free from contamination and no qualification is necessary. No equipment blank was submitted with this SDG

<u>Field Duplicates</u> [Form 1] - Field duplicate DUP05WG14 is associated with sample WHGLTA603WG14. The RPD meets the acceptance criteria and no qualification is required.

<u>Compound Quantitation</u> - Sample WHGLTA051WG14 was analyzed at a 10 fold dilution due to high levels of TCE.

#### Qualification Summary Table

<u>Note</u> - The laboratory provides informational codes in a column in the report page called flags. Those codes are removed and replaced with the appropriate qualifier

Sample ID	Analyte	Lab Val	Lab Qual	HGL Val	HGL Qual
WHGLTA603WG14	Bromomethane	0 4	U	0 4	R
	Methylene chloride	03	U	03	R
WHGLPU001WG14	Bromomethane	0 4	U	04	R
	Methylene chloride	03	U	03	R
DUP05WG14	Bromomethane	04	U	0 4	R
	Methylene chloride	03	U	0.3	R
WHGLTA051WG14	Bromomethane	04	U	04	R
	Methylene chloride	0.3	U	03	R
	Trichloroethene	Dilution re	sult used		
WHGLTA051WG14DL	Trichloroethene	170	70 na	170	No flag
WHGLTA029WG14	Bromomethane	0 4	U	04	R
	Methylene chloride	0.3	U	0.3	R

#### Volatile Organic Compounds SW-846 Method 8260B USEPA Level III Review

Site: NAS Fort Worth JRB

SDG # 203945

Laboratory, STL-Chicago

Date: 07 30.01

HydroGeoLogic, Inc Reviewer Kimberly Evers

Project. AFC001-26CE

Client Sample ID	Laboratory Sample ID	Lab Batch	Matrix
WHGLTA801-WG03	203945-1	25604	Water
DUP07	203945-2	25604	Water

Note The only compounds that are being considered are the target compounds reported in this SDG and those relevant compounds used for data validation

<u>Sample Delivery and Condition</u> - The samples arrived at the laboratory in acceptable condition and temperature, and properly preserved. Proper custody was documented. No qualification required.

<u>Holding Times</u> - All samples were analyzed within the required holding times for preserved water samples. No qualification required.

GC/MS Tuning [Form 5] - The initial calibration and sample analytical sequences were all performed within 12 hours of an acceptable MS tune. No qualification required

Initial Calibration [Form 6] - The initial calibration had acceptable average RRFs for all SPCCs. The mean %RSD for all analytes was below 15%; all compound %RSDs were <30% Compounds with a %RSD <15% are quantified using relative standard deviation. Those with %RSD >15% are quantified using the calibration curve. All calibration curves were evaluated and found to have r 2>0.995 and no qualification is necessary.

Continuing Calibration [Form 7] - One continuing calibration verification (CCV),run on 06.26 01, is associated with this SDG. All SPCCs had CCRFs in control. All CCC %Ds were <20%; all other compound %Ds were in control and no qualification is necessary.

<u>Surrogates</u> [Form 2] -All surrogate recoveries were within established control limits. No data required qualification.

<u>Laboratory Control Samples</u> [Form 3] - All %R results for LSC VBLK25604BS met established control limits and no qualification is necessary.

<u>MS/MSD</u> [Form 3] - Matrix Spike/Matrix Spike Duplicate analyses were not performed in this sample batch. No qualification required.

<u>Internal Standard Performance</u> [Form 8] - All internal standards met area and retention time criteria. No qualification necessary.

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Method Blanks [Form 1] - The method blank was free from contamination. No qualification necessary

<u>Trip Blanks</u> [Form 1] - Trip blank TB06140101 and equipment blank EB061401 from SDG #203944 are associated with these samples They were free from contamination and no qualification is necessary.

<u>Field Duplicates</u> [Form 1] - Field duplicate DUP07 is associated with sample WHGLTA801-WG03. The RPD meets the acceptance criteria and no qualification is required.

<u>Compound Quantitation</u> - Samples WHGLTA801-WG03 and DUP07 were analyzed at a 25X dilution due to high levels of trichloroethene.

Sample ID	Analyte	Lab Val	Lab Qual	HGL Val	HGL Qual
WHGLTA801-WG03	No qualification necessary				
DUP07	No qualification necessary				

#### Appendix IX Volatile Organic Compounds SW-846 Method 8260B USEPA Level III Review

Site NAS Fort Worth JRB SDG #: 203960

Laboratory: STL-Chicago Date. 08.27.01

HydroGeoLogic, Inc. Reviewer: Kimberly Evers Project: AFC001-26CE

Client Sample ID	Laboratory Sample ID	Analytical Batch	Matrix
WHGLTA050-WG03	203960-1	25674	Water
WHGLTA051-WG03	203960-2	25674	Water
WHGLTA004-WG03	203960-3	25674	Water
EB061501	203960-4	25674	Water
TB061501	203960-5	25674	Water

Note: These samples were only tested for TCE The only compounds that are being evaluated are TCE and those relevant compounds used for data validation

<u>Sample Delivery and Condition</u> - The samples arrived at the laboratory in acceptable condition and temperature, and properly preserved. Proper custody was documented. No qualification required

<u>Holding Times</u> - All samples were analyzed within the required holding times for preserved water samples. No qualification required.

GC/MS Tuning - The initial calibration and sample analytical sequences were all performed within 12 hours of an acceptable MS tune. No qualification required.

Initial Calibration - The initial calibration had acceptable average RRFs for all SPCCs. The mean %RSD for all analytes was below 15%; all compound %RSDs were <30% Compounds with a %RSD <15% are quantified using relative standard deviation. Those with %RSD >15% are quantified using the calibration curve. All calibration curves were evaluated and found to have r>0 995 and no qualification is required

<u>Continuing Calibration</u> - Two continuing calibration verifications (CCVs), one run on 06 28 01 and one run on 06 29.01, are associated with this SDG. All SPCCs had CCRFs in control. All CCC %Ds were <20%; all other compound %Ds were in control.

Surrogates - All surrogate recoveries were within established control limits. No data required qualification.

<u>Laboratory Control Samples</u> - All %R results for both batch LCSs were in control with the exception of ethylbenzene, m&p-xylenes and o-zylenes which had %Rs greater than the upper control limit. None of the environmental samples in this data package were being analyzed for these compounds and no qualification is necessary

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MS/MSD - Matrix Spike/Matrix Spike Duplicate analyses were not performed in this sample batch. No qualification required.

<u>Internal Standard Performance</u> - All internal standards met area and retention time criteria. No qualification necessary.

Method Blanks - Both method blanks were free from contamination No qualification necessary

Equipment and Trip Blanks - Trip blank TB061501 and EB061501 are associated with these samples. Both the trip blank and the equipment blank were free from contamination. No qualification necessary.

Field Duplicates - No duplicate pairs were submitted with this SDG. No qualification necessary

<u>Compound Quantitation</u> - The TCE results reported for samples WHGLTA050-WG03, WHGLTA051-WG03 and WHGLTA004-WG03 were analyzed at a 25 fold dilution due to high levels detected in the original analysis.

#### Qualification Summary Table

Sample ID	Analyte	Lab Val	Lab Qual	HGL Val	HGL Qual
WHGLTA050-WG03	No qualification necessary	-			
WHGLTA051-WG03	No qualification necessary				
WHGLTA004-WG03	No qualification necessary				

#### Trichloroethene SW8260B USEPA Level III Review

Site <sup>r</sup> Naval Air Station Fort Worth JRB, Texas	SDG # 204138
Laboratory STL-Chicago	Date 09 03.01
HydroGeoLogic, Inc Reviewer Ken Rapuano	

Client Sample ID	Laboratory Sample ID	Matrix
WHGLTA052-WG03	204138-001	Water

<u>Sample Delivery and Condition</u> - The sample arrived at the laboratory in acceptable condition and temperature. Proper custody (internal and external) was documented. No qualification required.

<u>Holding Times</u> - The sample was analyzed within the required holding time for preserved water samples, no qualification is necessary.

GC/MS Tuning - All BFB tunes associated with initial and continuing calibrations were in control. No qualification necessary

<u>Initial Calibration</u> - The initial calibrations had an acceptable %RSDs for TCE All SPCCs had acceptable mean RRF values, and all CCCs had acceptable %RSD values. No qualification necessary

Continuing Calibration - The continuing calibration had the %D in control for TCE All CCC %Ds and SPCC RRFs were in control No qualification necessary

Surrogates - All surrogate recoveries were in control, no qualification necessary

Laboratory Control Samples - All LCS results were in control, no qualification is necessary

MS/MSD - An MS/MSD was not performed in association with this SDG, no qualification is necessary

<u>Internal Standards</u> - All four ISs were in control for retention time and peak area for the sample analysis No qualification necessary

Method Blanks - The associated method blank was free from contamination; no qualification is necessary.

<u>Field Blanks</u> - Equipment blank EB062601 (results located in data package 204136) contained 0.22 F  $\mu$ g/L TCE. The action level is 1.1  $\mu$ g/L. The sample concentration is >> the action level and no qualification is necessary. Trip blank TB062601 (results located in data package 204136) were free from contamination. No qualification necessary

Field <u>Duplicates</u> - No field duplicates were submitted with this data package. No qualification necessary.

<u>Compound Quantitation</u> - The sample was analyzed at a 25x dilution because of the elevated level of TCE. The MDL and reporting limit are adjusted accordingly.

Qualification Summary Table

No data require qualification.

#### Metals SW-846 6010B/7000A Series USEPA Level III Review

Site: Naval Air Station Fort Worth JRB, Texas

SDG #: 204981

Laboratory STL-Chicago

Date: 11 19,01

HydroGeoLogic, Inc. Reviewer: Ken Rapuano

Project AFC001-26CC

Client Sample ID	Laboratory Sample ID	Matrix
THGLAOC1905-02	204981-1	Soil
IDW081501*	204981-2	Soil
EB081501	204981-3	Water

<sup>\*</sup> This sample was analyzed for disposal purposes only, and does not need validation to the DQOs presented in the NASFW Basewide QAPP.

<u>Sample Delivery and Condition</u> - The samples arrived at the laboratory preserved, and in acceptable condition and temperature. Proper custody (internal and external) was documented. No qualification required.

<u>Holding Times</u> - All samples were analyzed within the required holding times for preserved soil samples No qualification required.

<u>Calibration</u> - The initial and continuing calibration verification standards had acceptable recoveries No qualification required.

Method and Calibration Blanks - The preparation blank and associated CCBs showed contamination above the MDL for cadmium (0.3 μg/L), leading to an action level of 0.15 mg/kg, chromium (0.3 mg/kg), leading to an action level of 1.5 mg/kg, and zinc (0.8 mg/kg) leading to an action level of 4.0 mg/kg. The associated results for these elements were greater than the associated action levels and no qualification is necessary

The preparation blanks and CCBs associated with the soil sample had negative baseline drift for silver. The highest associated blank values is -1.5  $\mu$ g/L for silver, leading to an action level of 0.75 mg/kg. The silver result in sample number THGLAOC1905-02 was non-detect and should be UJ qualified at the MDL

Equipment Blanks - The equipment blank associated with this sample is EB081501. This equipment blank was contaminated with zinc (6.9 μg/L), leading to an action level of 3.45 mg/kg. The associated sample result is greater than the action level and no qualification is necessary

ICP Interference Check Sample - All %Rs were in control. No qualification necessary.

ICP Serial Dilution - No serial dilution performed. No qualification necessary.

Laboratory Control Samples - All LCSs had acceptable recoveries. No qualification required

<u>GFAA Recovery Tests</u> - The recovery test was below the LCL for selenium and thallium in sample THGLAOC1905-02 All of the affected selenium and thallium results are non-detect and should be UJ qualified.

<u>Matrix Spike Analyses</u> - A matrix spike/matrix spike duplicate was not analyzed with this data package. No qualification is necessary.

<u>Laboratory Duplicates</u> - A laboratory duplicate was not analyzed with this data package. No qualification necessary.

<u>Field Duplicates</u> - No field duplicate is associated with the sample in this SDG and no qualification is necessary.

<u>Compound Quantitation</u> - All analytes reported below the PQL are reported as F qualified detections The laboratory performed the analysis for lead at a 10x dilution due to the elevated concentration. The laboratory performed the analysis for selenium at a 5x dilution due to interferences in the sample

#### Qualification Summary Table

Sample ID	Analyte	Lab Val	Lab Qual	HGL Val	HGL Qual
THGLAOC1905-02	Selenium	0 76	U	0 76	ΠΊ
	Silver	0.064	U	0 064	กา
	Thallium	0 18	U	0 18	ΠΊ

#### Appendix IX SVOCs SW8270C USEPA Level III Review

Site Naval Air Station Fort Worth JRB, Texas

SDG # 204981

Laboratory STL-Chicago

Date: 11 14 01

HydroGeoLogic, Inc. Reviewer, Kimberly Evers

Project Number AFC001-26CC

Client Sample ID	Laboratory Sample ID	Lab Batch	Matrix
THGLAOC1905-02	204981-1	31873	Soil
THGLAOC1905-02	204981-1	35356	SPLP Extract
EB081501	204981-3	31874	Water

<u>Sample Delivery and Condition</u> - The samples arrived at the laboratory in acceptable condition and temperature. Proper custody (internal and external) was documented. No qualification required.

Holding Times - All samples were extracted and analyzed within the required holding times for soil samples.

<u>GC/MS Tuning</u> - All DFTPP tunes associated with initial and continuing calibrations were in control. No qualification necessary

<u>Initial Calibration</u> - 08 09.01 and 09.07.01. The average mean %RSD for all analytes was below 15%, all compound %RSDs were <30%. Several compounds with %RSD >15% are quantified using the calibration curve. All calibration curves were evaluated and found to have r<sup>2</sup>>0.990, with the following exceptions:

08.09.01 (31873). N-Nitrosodimethylamine had r<sup>2</sup><0.990. The associated result should be R qualified

08.09.01 (31873) 1.2-Dichlorobenzene had r<sup>2</sup><0.990. The associated result should be R qualified.

08 09.01 (31873). 4-Nitroquinoline-1-oxide had r<sup>2</sup><0 990. The absociated result should be R qualified.

09 07 01 (35356). 4-Nitroquinoline-1-oxide had  $r^2$ <0.990. This compound is not reported in the sample associated with this batch number. No qualification necessary.

<u>Continuing Calibration</u> - Two continuing calibration verifications (CCVs) are associated with the samples in this SDG. One was run on 08.11.01 (31873) and the other was run on 09.11 01 (35356) All CCC %Ds and SPCC RRFs were in control. The CCV had the %Ds within the 25% control limit for all compounds with the following exceptions

09.11.01 (35356) Benzyl alcohol had a %D of 58.08%. This compound is not reported in the sample associated with this batch number. No qualification necessary.

09.11.01 (35356): 2,4-Dimethylphenol had a %D of 28.58% This compound is not reported in the sample associated with this batch number. No qualification necessary.

09.11.01 (35356) Methyl methanesulfonate, listed in Appendix A of the project QAPP, had a %D that did not meet the %D requirements; however, no corrective action is required for this compound. No qualification necessary

09 11.01 (35356) 1,4-Dioxane had a %D of 74.39% This compound is not reported in the sample associated with this batch number. No qualification necessary

09 11 01 (35356) 2-Picoline, listed in Appendix A of the project QAPP, had a %D that did not meet the %D requirements; however, no corrective action is required for this compound. No qualification necessary.

09 11.01 (35356) Pentachloronitrobenzene, listed in Appendix A of the project QAPP, had a %D that did not meet the %D requirements; however, no corrective action is required for this compound. No qualification necessary.

09 11 01 (35356). Hexachloropropene had a %D of 25.43%. This compound is not reported in the sample associated with this batch number. No qualification necessary.

09.11 01 (35356). p-Phenylenediamine, listed in Appendix A of the project QAPP, had a %D that did not meet the %D requirements; however, no corrective action is required for this compound. No qualification necessary

<u>Surrogates</u> - All surrogate recoveries were in control with the exception of the surrogate terphenyl-d14 for the SPLP analysis of THGLAOC1905-02, which was below the LCL. The %R for this compound was above 10% and no qualification is necessary.

<u>Laboratory Control Samples</u> - The LCSs associated with the analytical results for all samples are in control for all compounds. No qualification necessary.

Note: The LSC associated with the equipment blank does not require validation and no qualification is necessary

MS/MSD - A matrix spike/matrix spike duplicate was preformed on soil sample THGLAQC1905-02 All %Rs were in control with the exception of a low %R of phenanthrene in the MS and MSD, and a low %R of fluoranthene and chrysene in the MSD. The associated detections of phenanthrene, fluoranthene and chrysene should be J qualified in the parent sample. The calculated RPDs were in control with the exception 2,4-dinitrophenol, phenanthrene, fluoranthene. pyrene. chrysene, benzo(a)anthracene. benzo(b)fluoranthene. benzo(k)fluoranthene. benzo(a)pyrene, indeno(1,2,3-cd)pyrene benzo(q,h,t)perylene. The associated detections of phenanthrene, fluoranthene and chrysene have already been J qualified in the parent sample due to a low %R in the MS or MSD. The associated 2,4-dinitrophenol result is non-detect and no qualification is necessary. The associated pyrene, benzo(a)anthracene, benzo(k)fluoranthene, benzo(a)pyrene. benzo(b)fluoranthene, indeno(1,2,3-cd)pyrene and benzo(a,h,i)pervlene detections should be J qualified.

Internal Standards - All six ISs were in control for retention time and peak area with the exception of perylene-d12 in the soil sample THGLAOC1905-02. The associated dibenzo(a,h)anthracene detection should be J qualifed in sample THGLAOC1905-02. The associated detections of benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, and benzo(a)pyrene have already been J qualified in sample THGLAOC1905-02 due to a failure to meet QC RPD requirements in the MS/MSD.

Method Blanks - The method blank associated with samples in this SDG was free from contamination. No qualification is necessary.

<u>Field Blanks</u> - The equipment blank, EB081501, associated with the samples was free from contamination and no qualification is necessary.

Field Duplicates - No field duplicate is associated with samples in this SDG. No qualification is necessary.

Compound Quantitation - No discrepancies were reported in this data package.

#### **Qualification Summary Table**

Sample ID	Analyte	Lab Val	Lab Qual	HGL Val	HGL Qual
THGLAOC1905-02	N-Nitrosodimethylamine	110	U	110	R
(Soil)	1,2-Dichlorobenzene	90	U	90	R
	Phenanthrene	2100	No flag	2100	J
	Fluoranthene	3500	No flag	3500	J
	Pyrene	3600	No flag	3600	J
	Benzo(a)anthracene,	2000	No flag	2000	J
	Chysene	2000	No flag	2000	J
	Benzo(b)fluoranthene	2200	No flag	2200	J
	Benzo(k)fluoranthene	1400	No flag	1400	J
	Benzo(a)pyrene	1800	No flag	1800	J
	Indeno(1,2,3-cd)pyrene	1100	No flag	1100	J
	Dibenzo(a,h)anthracene	430	No flag	430	J
	Benzo(g,h,i)perylene	1300	No flag	1300	J
	4-Nitroquinoline-1-oxide	1400	U	1400	R

#### **Appendix IX Volatile Organic Compounds**

SW-846 Method 8260B USEPA Level III Review

Site NAS Fort Worth JRB

SDG#: 204981

Laboratory STL-Chicago

Date.11.12.01

HydroGeoLogic, Inc. Reviewer: Kimberly Evers

Project AFC001-26CC

Client Sample ID	Laboratory Sample ID	Lab Batch	Matrix
THGLAOC1905-02	204981-1	29259	Soil
IDW081501*	204981-2	29259	Soil
EB081501	204981-3	29040	Water
TB081501	204981-4	29040	Water

<sup>\*</sup> Sample IDW081501 is included in this SDG but does not require validation

<u>Sample Delivery and Condition</u> - The samples arrived at the laboratory in acceptable condition and temperature, and properly preserved. Proper custody was documented. No qualification is necessary

<u>Holding Times</u> - All samples were analyzed within the required holding time for soil samples and no qualification is necessary

<u>GC/MS Tuning</u> - The initial calibration and sample analytical sequences were all preformed within 12 hours of an acceptable MS tune No qualification required

Initial calibration - The initial calibration associated with the soil samples had acceptable average RRFs for all SPCCs. The mean %RSD for all analytes was below 15% in both calibrations, all compound %RSDs were <30%. Compounds with a %RSD <15% are quantified using the calibration curve. All calibration curves were evaluated and found to have r  $^2$ >0.990 with the exception of bromomethane, iodomethane and acetone, which had r  $^2$ <0.990 All associated bromomethane, iodomethane and acetone results in THGLAOC1905-02 should be R qualified

Note: The initial calibration from 07.05 01 is associated with the equipment and the top blank and does not require validation. No qualification necessary.

Continuing Calibration - Two continuing calibration verification (CCV) are associated with this SDG One was run on 08.17.01 (29040) and one was run on 08.20 01 (29259). All SPCCs had CCRFs in control. All CCC %Ds were <20%, all other %Ds were in control with the following exception:

29259: 1,2-Dibromo-3-chloropropane had a %D of 34.45% All associated results should be R qualified.

Note The CCV run on 08.17.01 is associated with the equipment blank and the trip blank and does not require validation. No qualification necessary

<u>Surrogates</u> - All surrogate recoveries were within established control limits and no qualification is necessary.

<u>Laboratory Control Samples</u> - All %R results for the LSC associated with batches 29259 met established control limits and no qualification is necessary.

Note: The LCS associated with the equipment blank and the trip blank does not require validation and no qualification is necessary

MS/MSD - A matrix spike/matrix spike duplicate was not analyzed with this data package. No qualification necessary.

<u>Internal Standard Performance</u> - All internal standards met area and retention time criteria. No qualification necessary

Method Blanks - Both method blanks were free from contamination. No qualification necessary.

<u>Trip Blanks</u> - Trip blank TB081501 and equipment blank EB081501 are associated with the samples in this SDG. The equipment blank and the trip blank were free of contamination with the exception of 1  $\mu$ g/L of chloromethane in the trip blank. The associated result is non-detect and no qualification is necessary

<u>Field Duplicates</u> - No duplicate pairs were submitted with this data package and no qualification is necessary.

Compound Quantitation - No discrepancies.

#### **Qualification Summary Table**

Sample ID	Analyte	Lab Val	Lab Qual	HGL Val	HGL Qual
THGLAOC1905-02	Bromomethane	3	U	3	R
	Iodomethane	4	U	4	R
-	Acetone	4	U	4	R
	1,2-Dibromo-3- chloropropane	1	U	1	R

#### Metals SW-846 6010B/7000A Series USEPA Level III Review

Site: Naval Air Station Fort Worth JRB, Texas

SDG # 205075

Laboratory: STL-Chicago

Date 11 20 01

HydroGeoLogic, Inc. Reviewer: Ken Rapuano

Project AFC001-26CC

Client Sample ID	Laboratory Sample ID	Matrix
BHGLAOC1905-01	205075-1	Soil
BHGLAOC1905-02	205075-2	Soil
BHGLAOC1905-03	205075-3	Soil
EB082001	205075-8	Water

<u>Sample Delivery and Condition</u> - The samples arrived at the laboratory preserved, and in acceptable condition and temperature. Proper custody (internal and external) was documented. No qualification required

<u>Holding Times</u> - All samples were analyzed within the required holding times for preserved soil samples. No qualification required

<u>Calibration</u> - The initial and continuing calibration verification standards had acceptable recoveries. No qualification required

Method and Calibration Blanks - The preparation blank and associated CCBs showed contamination above the MDL for chromium (0.3 mg/kg), leading to an action level of 1.5 mg/kg, tin (1.6 mg/kg), leading to an action level of 8.0 mg/kg, vanadium (3.8 μg/L), leading to an action level of 1.9 mg/kg, and zinc (5.8 mg/kg), leading to an action level of 29 mg/kg. The associated results for chromium and vanadium were greater than the associated action levels and no qualification is necessary. All soil samples had detections of tin and zinc are below the associated action levels, and these detections are qualified U as laboratory artifacts.

The preparation blanks and CCBs associated with the soil samples had negative baseline drift for the following elements:

Beryllium. The highest associated blank value is -0 047 mg/kg, leading to an action level of 0 235 mg/kg. All beryllium results for soil samples are above the action level and no qualification is necessary.

Antimony. The highest associated blank value is -0.4 mg/kg, leading to an action level of 2.0 mg/kg. All antimony results for soil samples are non detect and should be qualified UJ.

Silver. The highest associated blank value is -0.1 mg/kg, leading to an action level of 0.5 mg/kg. All silver results for soil samples are non detect and should be qualified UJ

Equipment Blanks - The equipment blank associated with this sample is EB082001. This equipment blank was contaminated with zinc (8.0 µg/L), leading to an action level of 4.0 mg/kg. The associated sample results are greater than the action level, but have already been qualified U as laboratory artifacts due to method blank contamination; no additional qualification is necessary

ICP Interference Check Sample - All %Rs were in control No qualification necessary.

ICP Serial Dilution - No serial dilution performed. No qualification necessary.

<u>Laboratory Control Samples</u> - All LCSs had acceptable recoveries. No qualification required.

GFAA Recovery Tests - The recovery test for antimony was above the UCL for all three soil samples All of the affected antimony results are non-detect and should be UJ qualified. The recovery tests for selenium and thallium were below the LCL (but above 10%) for all three soil samples. All of the affected selenium and thallium results are non-detect and should be UJ qualified.

Matrix Spike Analyses - A matrix spike/matrix spike duplicate was not analyzed with this data package No qualification is necessary

<u>Laboratory Duplicates</u> - A laboratory duplicate was not analyzed with this data package. No qualification necessary

<u>Field Duplicates</u> - No field duplicate is associated with the sample in this SDG and no qualification is necessary

<u>Compound Quantitation</u> - All analytes reported below the PQL are reported as F qualified detections. The laboratory performed the analysis for lead at a 10x dilution due to the elevated concentration. The laboratory performed the analysis for selenium at a 5x dilution due to interferences in the sample

#### Qualification Summary Table

Sample ID	Analyte	Lab Val	Lab Qual	HGL Val	HGL Qual
BHGLAOC1905-01	Antimony	0.23	U	0 23	บา
	Selenium	0.19	U	0.19	กา
	Silver	0 080	U	0 080	กา
	Thallium	0 23	U	0 23	บา
	Tin	1.7	F	1.7	U
	Zinc	27.3		27 3	U
BHGLAOC1905-02	Antimony	0.21	U	0 21	IJ
	Selenium	0 18	υ	0 18	กา
	Silver	0.075	U	0.075	υJ
	Thallium ·	0 21	U	0.21	กา
	Tin	1.8	F	18	U
	Zinc	16.3	F	16 3	U

# 724 441

Sample ID	Analyte	Lab Val	Lab Qual	HGL Val	HGL Qual
BHGLAOC1905-03	Antimony	0.17	Ü	0 17	UJ
	Selenium	0.14	U	0 14	ΠΊ
	Silver	0.059	U	0 059	UJ
	Thallium	0.17	U	0 17	กา
	Tın	15	F	15	U
	Zinc	13.9	F	13 9	U

#### Appendix IX SVOCs SW8270C USEPA Level III Review

Site: Naval Air Station Fort Worth JRB, Texas SDC

SDG #. 205075

Laboratory: STL-Chicago

Date: 11.19.01

HydroGeoLogic, Inc Reviewer. Ken Rapuano

Project Number. AFC001-26CC

Client Sample ID	Laboratory Sample ID	Lab Batch	Matrix
BHGLAOC1905-01	205075-1	30589/33348	Soil
BHGLAOC1905-02	205075-2	30589/33348	Soil
BHGLAOC1905-03	205075-3	30589/33348	Soil
EB082001	205075-8	30208	Water

<u>Sample Delivery and Condition</u> - The samples arrived at the laboratory in acceptable condition and temperature. Proper custody (internal and external) was documented. No qualification required.

<u>Holding Times</u> - All samples were extracted and analyzed within the required holding times for soil samples; however, each soil sample was re-extracted 24 days outside the 14-day holding time. The re-extracted batch (batch 33348) is rejected and no further validation is performed based on the QC results for that batch. The original results from batch 30589 should be used for all soil samples.

<u>GC/MS Tuning</u> - All DFTPP tunes associated with initial and continuing calibrations were in control. No qualification necessary.

<u>Initial Calibration</u> - 07.27 01 and 09 21.01 All SPCC mean RRFs were above 0.050 and all CCC %RSDs were less than 30%. The average %RSD for all analytes was below 15%; all compound %RSDs were <30% No qualification necessary.

Note that the Form VI calibration summary (pp. 99-106) shows average RRFs and %RSDs for all compounds; however, several compounds are listed on the raw calibration summary reports (pp. 193-208) as being quantitated using linear, weighted linear, or power functions. The  $r^2$  values shown on pp. 193-208 are in control for all affected compounds except 1,2-dichlorobenzene and 4-nitroquinoline-1-oxide. The CCV and LCS are in control for 1,2-dichlorobenzene using either linear response or weighted linear response, and as this compound is not detected in any sample, it is the judgment of the validator that sufficient initial calibration control is demonstrated for this compound and no qualification is necessary. The CCV and LCS are not used to control 4-nitroquinoline-1-oxide results (it is a compound listed in Appendix A of the NASFW Basewide QAPP), and this compound also needs no qualification as initial calibration control is shown for linear response.

Continuing Calibration - The continuing CCV associated with the samples in this SDG had all CCC %Ds and SPCC RRFs in control. The CCV had the %Ds within the 25% (30% for selected compounds) control limit for all compounds (50% for those compounds listed in Appendix A). No qualification necessary

Surrogates - All surrogate recoveries were in control. No qualification is necessary.



724 443

<u>Laboratory Control Samples</u> - The LCSs associated with the analytical results for all samples are in control for all compounds, with the exception of a low %R for benzyl alcohol. All associated results for this compound should be rejected an qualified R.

<u>MS/MSD</u> - No`matrix spike/matrix spike duplicate was in association with the soil samples in this data package. No qualification necessary

Internal Standards - Each sample had all six ISs in control for retention time and peak area No qualification necessary.

<u>Method Blanks</u> - The method blank associated with samples in this SDG was free from contamination. No qualification is necessary.

<u>Field Blanks</u> - The equipment blank, EB082001, associated with the samples was free from contamination and no qualification is necessary

Field Duplicates - No field duplicate is associated with samples in this SDG. No qualification is necessary

Compound Quantitation - No discrepancies were reported in this data package.

#### Qualification Summary Table

Sample ID	Analyte	Lab Val	Lab Qual	HGL Val	HGL Qual
BHGLAOC1905-01	Benzyl alcohol	120	U	120	R
BHGLAOC1905-01 (reanalysis)	All results	MDL	U	MDL	RX
BHGLAOC1905-02	Benzyl alcohol	110	U	110	R
BHGLAOC1905-02 (reanalysis)	All results	MDL	U	MDL	RX
BHGLAOC1905-03	Benzyl alcohol	120	U	120	R
BHGLAOC1905-03 (reanalysis)	B2EHP	290	F	290	RX
	All other results	MDL	U	MDL	RX

#### **Appendix IX Volatile Organic Compounds**

SW-846 Method 8260B USEPA Level III Review

Site: NAS Fort Worth JRB SDG#: 205075

Laboratory: STL-Chicago Date:10 30.01

HydroGeoLogic, Inc. Reviewer Kimberly Evers Project: AFC001-26CC

Client Sample ID	Laboratory Sample ID	Lab Batch	Matrix
BHGLAOC1905-01	205075-1	30398	Soil
BHGLAOC1905-02	205075-2	30265	Soil
BHGLAOC1905-03	205075-3	30265	Soil
BHGLAOC1906-02*	205075-4	30398	Soil
BHGLAOC1906-03*	205075-5	30398	Soil
BHGLAOC1907-03*	205075-6	30265	Soil
DUP082001*	205075-7	30398	Soil
EB082001	205075-8	31000	Water
TB082001	205075-9	31000	Water

<sup>\*</sup> Analyzed for Trichloroethene only

<u>Sample Delivery and Condition</u> - The samples arrived at the laboratory in acceptable condition and temperature, and properly preserved Proper custody was documented No qualification is necessary

<u>Holding Times</u> - All samples were analyzed within the required holding time for soil samples and no qualification is necessary.

GC/MS Tuning - The initial calibration and sample analytical sequences were all preformed within 12 hours of an acceptable MS tune. No qualification required

Initial calibration - The initial calibration associated with samples BHGLAOC1905-2, BHGLAOC1905-3 and BHGLAOC1907-3 had acceptable average RRFs for all SPCCs. The mean %RSD for all analytes was below 15%; all compound %RSDs were <30%. Compounds with a %RSD <15% are quantified using the calibration curve. All calibration curves were evaluated and found to have r. 2>0.990 and no qualification is necessary with the exception of bromomethane, iodomethane and acetone which had an r2 <0.990. All associated bromomethane, iodomethane and acetone results in samples BHGLAOC1905-2 and BHGLAOC1905-3 should be R qualified. These compounds are not reported for sample BHGLAOC1907-03.

The initial calibration associated with samples BHGLAOC1905-1, BHGLAOC1906-2 and BHGLAOC1906-3 had acceptable average RRFs for all SPCCs. The mean %RSD for all analytes was below 15%, all compound %RSDs were <30%. Compounds with a %RSD <15% are quantified using the calibration curve. All calibration curves were evaluated and found to have r ²>0 990 and no qualification is necessary.

Note. The initial calibration preformed on 08 29 01 is associated with the equipment and trip blank and does not require validation. No qualification is necessary

Continuing Calibration - Three continuing calibration are associated with this SDG. One was run on 08.28.01 (30265), one was run on 08.29.01 (30398) and one was run on 09.02.01 (31000). All SPCCs had CCRFs in control. All CCC %Ds were <20%; all other %Ds were in control with the following exceptions:

30265 1,2-dipromo-3-chloropropane had a %D of 28.41% All associated results should be R qualified.

30265: Acrolein, listed in Appendix A of the QAPP, had a %D that did not meet the %D requirements; however, no corrective action is required for this compound.

30265 lodomethane had a %D of 25 60%. All associated results should be R qualified

30398. Chloromethane had a %D of 32.90% All associated results should be R qualified.

30398. Bromomethane had a %D of 72 67%. All associated results should be R qualified.

30398 Chloroethane had a %D of 34.11%. All associated results should be R qualified.

30398, 1,2-dibromo-3-chloropropane had a %D of 25.16% All associated results should be R qualified.

30398: Pentachloroethane had a %D of 45 02%. All associated results should be R qualified.

Note The continuing calibration verification on 09.02 01 is associated with the equipment and trip blank and does not require validation. No qualification necessary

<u>Surrogates</u> - All surrogate recoveries were within established control limits with the exception of a high %R for dibromofluoromethane in sample number BHGLAOC1906-03. All detection in this sample should be J qualified

<u>Laboratory Control Samples</u> - All %R results for the LSCs associated with batches 30265, 30398 and 31000 met established control limits with the exception of a high %R for bromomethane and chloroethane in the LCS associated with batch 30398. All associated results in samples BHGLAOC1905-01, BHGLAOC1906-02, BHGLAOC1906-03 and DUP082001 for bromomethane and chloroethane have already been R qualified due to a failure to meet acceptance criteria in the CCV associated with these samples.

Note The LCS associated with the equipment blank and the trip blank does not require validation and no qualification is necessary.

<u>MS/MSD</u> - A matrix spike/matrix spike duplicate was not analyzed with this data package. No qualification necessary.

Internal Standard Performance - All internal standards met area and retention time criteria with the exception of sample BHGLAOC1906-03. All internal areas were below the 50% acceptance limits. The associated detection of TCE should be J qualified.

Method Blanks - All method blanks were free from contamination. No qualification necessary.

<u>Trip Blanks</u> - Trip blank TB082001 and equipment blank EB082001 were free of contamination and no qualification is necessary.

<u>Field Duplicates</u> - Field duplicate DUP082001 is associated with sample BHGLAOC1907-03. No detections are reported in either member of this duplicate pair. No qualification is necessary.

Compound Quantitation - No discrepancies.

#### Qualification Summary Table

Note - The laboratory provides informational codes in a column in the report page called flags. Those codes are removed and replaced with the appropriate qualifier

Sample ID	Analyte	Lab Val	Lab Qual	HGL Val	HGL Qual
BHGLAOC1905-01	Chloromethane	1	U	1	R
	Bromomethane	3	U	3	R
	Chloroethane	2	U	2	R
	1,2-dibromo-3-chloropropane	1	U	1	R
	Pentachloroethane	6	U	6	R
BHGLAOC1905-02	Bromomethane	3	U	3	R
	Iodomethane	3	U	3	R ·
	Acetone	4	U	4	R
	1,2-dibromo-3-chloropropane	1	U	1	R
BHGLAOC1905-03	Bromomethane	3	U	3	R
	Iodomethane	3	U	3	R
	Acetone	14	No flag	14	R
	1,2-dibromo-3-chloropropane	1	U	1	R
BHGLAOC1906-02	No qualification necessary				·
BHGLAOC1906-03	Trichloroethene	8	No flag	8	J
BHGLAOC1907-03	No qualification necessary				
DUP082001	No qualification necessary				

#### Metals SW-846 6010B/7000A Series USEPA Level III Review

Site: Naval Air Station Fort Worth RB, Texas SDG #: 205104

Laboratory: STL-Chicago Date: 11.26.01

HydroGeoLogic, Inc. Reviewer: Ken Rapuano Project AFC001-26CC

Client Sample ID	Laboratory Sample ID	Matrix
BHGLAOC1908-01	205104-1	Soil
BHGLAOC1908-02	205104-2	Soil
BHGLAOC1908-03	205104-3	Soil
BHGLSWMU1919-02*	205104-4	Soil
BHGLSWMU1919-03*	205104-5	Soil
BHGLSWMU1924-01*	205104-7	Soil
BHGLSWMU1924-02*	205104-8	Soil
BHGLSWMU1924-03*	205104-9	Soil
BHGLSWMU1924-04*	205104-10	Soil
BHGLSWMU1924-05*	205104-11	Soil
EB082101	205104-16	Water

<sup>\*</sup> Analyzed only for a sample-specific abbreviated list of metals

<u>Sample Delivery and Condition</u> - The samples arrived at the laboratory in acceptable condition and temperature. Proper custody (internal and external) was documented. No qualification required.

<u>Holding Times</u> - All samples were analyzed within the required holding times for soil samples. No qualification required

<u>Calibration</u> - The initial and continuing calibration verification standards had acceptable recoveries No qualification required.

Method and Calibration Blanks - The preparation blank and associated CCBs showed contamination above the MDL for **chromium** (0.3 mg/kg), leading to an action level of 1.5 mg/kg; **tin** (1.6 mg/kg), leading to an action level of 8.0 mg/kg; **vanadium** (3.8 µg/L), leading to an action level of 1.9 mg/kg, and **zinc** (5 8 mg/kg), leading to an action level of 29 mg/kg. All associated results for chromium and vanadium were greater than the associated action levels and no qualification is necessary. All associated tin and zinc results are below the associated action levels, and these detections are qualified U as laboratory artifacts.

The preparation blanks and CCBs associated with the soil samples had negative baseline drift for the following elements:

Beryllium. The highest associated blank value is ~0.047 mg/kg, leading to an action level of 0.235 mg/kg. All beryllium results for soil samples are above the action level and no qualification is necessary.

Antimony The highest associated blank value is -0.4 mg/kg, leading to an action level of 2.0 mg/kg. The non-detect in sample BHGLAOC1908-01 should be qualified UJ. All other associated antimony results should retain the F-qualifier.

Silver The highest associated blank value is -0.1 mg/kg, leading to an action level of 0.5 mg/kg. All associated silver results for soil samples are non-detect and should be qualified UJ

Equipment Blanks - The equipment blank associated with this sample is EB082101. This equipment blank was contaminated with zinc (6.9 μg/L), leading to an action level of 3 45 mg/kg. The associated sample results are greater than the action level, but have already been qualified U as laboratory artifacts due to method blank contamination, no additional qualification is necessary.

ICP Interference Check Sample - All %Rs were in control. No qualification necessary.

<u>ICP Serial Dilution</u> - A serial dilution was performed on sample BHGLSWMU1924-02 Vanadium did not meet the 10 %D criterion. All associated vanadium results are less than 5x the PQL and no qualification is necessary

<u>Laboratory Control Samples</u> - All LCSs had acceptable recoveries No qualification required.

GFAA Recovery Tests - The recovery test for antimony was above the UCL for samples BHGLAOC1908-02 and BHGLAOC1908-03. The antimony result for sample BHGLAOC1908-02 should retain its F-qualifier. The antimony result for sample BHGLAOC1908-03 is a non-detect and should be UJ qualified. The recovery tests for selenium were below the LCL (but above 10%) for samples BHGLAOC1908-01, BHGLAOC1908-02, BHGLAOC1908-03. All of the affected selenium results are non-detect and should be UJ qualified. The recovery tests for thallium were below the LCL (but above 10%) for samples BHGLAOC1908-02 and BHGLAOC1908-03. All of the affected thallium results are non-detect and should be UJ qualified.

Matrix Spike Analyses - A matrix spike/matrix spike duplicate was performed on sample BHGLSWMU1924-02. The matrix spike had high recoveries for arsenic and vanadium, and the MS/MSD pair had high RPDs for arsenic and vanadium. Both these elements should retain the F-qualifier in the parent sample. No qualification is necessary.

<u>Laboratory Duplicates</u> - A laboratory duplicate was not analyzed with this data package. No qualification necessary.

<u>Field Duplicates</u> - No field duplicate is associated with the samples in this SDG and no qualification is necessary

<u>Compound Quantitation</u> - All analytes reported below the PQL are reported as F-qualified detections. The laboratory performed analyses for lead at a 10x or 20x dilutions due to the elevated concentrations in the samples.

#### Qualification Summary Table

Sample ID	Analyte	Lab Val	Lab Qual	HGL Val	HGL Qual	
BHGLAOC1908-01	Selenium	0 20	U	0 20	บม	
	Silver	0 082	U	0.082	บม	
	Tin	16	F	1.6	U	
	Zinc	20.3	F	20 3	U	
BHGLAOC1908-02	Selenium	0.18	U	0 18	บม	
	Silver	0.075	U	0.075	UJ	
	Thallium	0 21	U	0 21	υJ	
	Tin	1.9	F	19	U	
	Zinc	25.5	F	25.5	υ	
BHGLAOC1908-03	Antimony	0.24	U	0 24	υJ	
	Selenium	0.20	U	0.20	UJ	
	Silver	0.084	υ	0.084	UJ	
	Thallium	0.24	U	0 24	บง	
	Tin	2.1	F	2.1	U	
	Zinc	16.7	F	16.7	U	
BHGLSWMU1919-02	No qualification necessary					
BHGLSWMU1919-03	No qualification necessary			_		
BHGLSWMU1924-01	No qualification necessary					
BHGLSWMU1924-02	No qualification necessary					
BHGLSWMU1924-03	No qualification necessary					
BHGLSWMU1924-04	No qualification necessary	No qualification necessary				
BHGLSWMU1924-05	No qualification necessary					

#### Appendix IX SVOCs SW8270C USEPA Level III Review

Site Naval Air Station Fort Worth JRB. Texas

SDG # 205104

Laboratory: STL-Chicago

Date: 11.26.01

HydroGeoLogic, Inc. Reviewer: Ken Rapuano

Project Number: AFC001-26CC

Client Sample ID	Laboratory Sample ID	Matrix
BHGLAOC1908-01	205104-1	Soil
BHGLAOC1908-02	205104-2	Soil
BHGLAOC1908-03	205104-3	Soil
BHGLSWMU1919-04*	205104-6	Soil
BHGLSWMU1924-03*	205104-9	Soil
BHGLSWMU1926-04*	205104-14	Soil**
EB082101	205104-16	Water

<sup>\*</sup> Analyzed only for a sample-specific abbreviated list of SVOCs

<u>Sample Delivery and Condition</u> - The samples arrived at the laboratory in acceptable condition and temperature. Proper custody (internal and external) was documented. No qualification required.

<u>Holding Times</u> - All samples were extracted and analyzed within the required holding times for soil samples; however, each soil sample was re-extracted 22 days outside the 14-day holding time. The re-extracted batch (batch 33348) is rejected and no further validation is performed based on the QC results for that batch. The original results from extraction batch 30833 should be used for all soil samples.

<u>GC/MS Tuning</u> - All DFTPP tunes associated with initial and continuing calibrations were in control No qualification necessary.

Initial Calibration - 07.27.01 and 09.21 01: All SPCC mean RRFs were above 0.050 and all CCC %RSDs were less than 30%. The average %RSD for all analytes was below 15%; all compound %RSDs were <30%. No qualification necessary.

Note that the Form VI calibration summary (pp. 131-138) shows average RRFs and %RSDs for all compounds; however, several compounds are listed on the raw calibration summary reports (pp. 224-239) as being quantitated using linear, weighted linear, or power functions. The r² values shown on pp. 224-239 are in control for all affected compounds except 1,2-dichlorobenzene and 4-nitroquinoline-1-oxide The CCV and LCS are in control for 1,2-dichlorobenzene using either linear response or weighted linear response, and as this compound is not detected in any sample, it is the judgment of the validator that sufficient initial calibration control is demonstrated for this compound and no qualification is necessary. The CCV and LCS are not used to control 4-nitroquinoline-1-oxide results (it is a compound listed in

<sup>\*\*</sup> The chain of custody requests an SPLP extract and analysis for this sample, these were not performed

Appendix A of the NASFW Basewide QAPP), and this compound also needs no qualification as initial calibration control is shown for linear response.

Continuing Calibration - The continuing CCV associated with the samples in this SDG had all CCC %Ds and SPCC RRFs in control The CCV had the %Ds within the 25% (30% for selected compounds) control limit for all compounds (50% for those compounds listed in Appendix A) No qualification necessary

<u>Surrogates</u> - All surrogate recoveries were in control No qualification is necessary.

<u>Laboratory Control Samples</u> - The LCSs associated with the analytical results for all samples are in control for all compounds, with the exception of a low %R for benzyl alcohol All associated results for this compound should be rejected an qualified R

MS/MSD - A matrix spike/matrix spike duplicate was performed on sample BHGLSWMU1919-04. All %Rs and RPDs were in control. No qualification necessary.

Internal Standards - Each sample had all six ISs in control for retention time and peak area, with the exception of the peak area of IS naphthalene-d8 in sample BHGLSWMU1926-04 No SVOCs associated with this IS are reported for this sample No qualification necessary

<u>Method Blanks</u> - The method blank associated with samples in this SDG was free from contamination. No qualification is necessary.

<u>Field Blanks</u> - The equipment blank, EB082101, associated with the samples was free from contamination and no qualification is necessary.

Field Duplicates - No field duplicate is associated with samples in this SDG. No qualification is necessary.

Compound Quantitation - Compounds detected below the PQL are reported qualified F

#### Qualification Summary Table

Sample ID	Analyte	Lab Val	Lab Qual	HGL Val	HGL Qual
BHGLAOC1908-01	Benzyl alcohol	120	U	120	R
BHGLAOC1908-01 (reanalysis)	All results	MDL	U	MDL	RX
BHGLAOC1908-02	Benzyl alcohol	120	U	120	R
BHGLAOC1908-02 (reanalysis)	All results	MDL	U	MDL	RX
BHGLAOC1908-03	Benzyl alcohol	120	U	120	R
BHGLAOC1908-03 (reanalysis)	All results	MDL	U	MDL	RX
BHGLSWMU1919-04	No qualification necessary.				
BHGLSWMU1924-03	No qualification necessary.				
BHGLSWMU1926-04	No qualification necessary.				

#### Appendix IX Volatile Organic Compounds

SW-846 Method 8260B USEPA Level III Review

Site. NAS Fort Worth JRB

SDG# 205104

Laboratory STL-Chicago

Date. 11.20 01

HydroGeoLogic, Inc. Reviewer: Ken Rapuano

Project: AFC001-26CC

Client Sample ID	Laboratory Sample ID	LCS/Method Blank Batch	Matrix
BHGLAOC1908-01	205104-1	30381	Soil
BHGLAOC1908-02	205104-2	30381	Soil
BHGLAOC1908-03	205104-3	30381	Soil
BHGLSWMU1919-03*	205104-5	30381	Soil
BHGLSWMU1919-04*	205104-6	30845	Soil
BHGLSWMU1924-03*	205104-9	30871	Soil
BHGLSWMU1925-03*	205104-12	30871 & 30662	Soil & Exract
BHGLSWMU1926-03*	205104-13	30871 & 30662	Soil & Exract
BHGLSWMU1926-04*	205104-14	30871/30861 & 30662	Soil & Exract
BHGLSWMU1927-04*	205104-15	30871 & 30662	Soil & Exract
EB082101	205104-16	30789	Water
TB082101	205104-17	30789	Water

<sup>\*</sup> Analyzed for selected VOCs only

<u>Sample Delivery and Condition</u> - The samples arrived at the laboratory in acceptable condition and temperature, and properly preserved. Proper custody was documented. No qualification is necessary.

<u>Holding Times</u> - All samples were analyzed within the required holding time for soil samples and no qualification is necessary

GC/MS Tuning - The initial calibration and sample analytical sequences were all preformed within 12 hours of an acceptable MS tune, with one exception. The SPLP extract for sample BHGLSWMU927-04 was injected 12 hours and 4 minutes after the BFB tuning standard, and the matrix spike of the SPLP extract of sample BHGLSWMU1925-03 was injected 12 hours and 40 minutes after the BFB tuning standard. In the judgment of the validator, this is a minor discrepancy and no qualification is required.

<u>Initial Calibration</u> - Several ICal runs are reported in this data package. The QC issues associated with each one are discussed below:

pp. 148-150 This initial calibration is associated with the trip and equipment blanks, and no qualification is performed based on this calibration.

pp. 314-316: This initial calibration is associated with all soil analyses except the dilution of sample BHGLSWMU1926-04. Not all target analytes are included on the Form VI summary, and the raw calibration data on pp. 317-329 were used to supplement this Form. [The laboratory resubmitted revised ICal pages to correct this deficiency after the data review was complete.] This calibration had acceptable average RRFs for all SPCCs and %RSDs for all CCCs. The mean %RSD for all analytes was below 15%; all compound %RSDs were <30%. Some compounds with a %RSD >15% are quantified using the calibration curve. All calibration curves were evaluated and found to have r. 2>0.990. No qualification is necessary.

pp 401-403. This initial calibration is associated only with QC samples and is not evaluated. No qualification necessary

pp 552-554: This initial calibration is associated with all SPLP extract analyses. The only target compounds are benzene, toluene, and acrylonitrile. This calibration had acceptable average RRFs for all SPCCs and %RSDs for all CCCs. The mean %RSD for all analytes was below 15%; all target compound %RSDs were below 30%. No qualification necessary

pp 657-659: This initial calibration is associated only with the diluted analysis of toluene in soil sample BHGLSWMU1926-04. Therefore, only the SPCCs and CCCs (note that toluene is a CCC) results, and total average %RSD, are subject to review for this ICal. This calibration had acceptable average RRFs for all SPCCs and %RSDs for all CCCs. The mean %RSD for all analytes was below 15%; the toluene %RSD was below 30%. No qualification necessary.

Continuing Calibration - Each CCV was evaluated for SPCC RFFs, CCC %Ds, and target analyte %Ds<25%. Compounds listed in Appendix A of the QAPP have an advisory %D requirement of 50%, with no qualification or corrective action if this requirement is not met

pp. 747-749 and 755: This continuing calibration is associated with the soil analyses of samples BHGLAOC1908-01, -02, and -03, and BHGLSWMU1919-03. SPCCs and CCCs met criteria. The following compounds did not meet %D criteria: chloromethane, chloroethane, bromethane. All associated results should be R qualified. The 1,2-dibromo-3chloropropane %D was 25 2%. This exceedence is considered by the validator to be nominal and this compound should not be qualified.

pp 760-762. This initial calibration is associated with all SPLP extract analyses. The only target compounds are benzene, toluene, and acrylonitrile. All SPCCs, CCCs, and target compounds met criteria and no qualification is necessary.

pp. 788-790 and 795. These CCVs are not associated with environmental samples and were not evaluated.

pp. 788-790 and 795. This continuing calibration is associated with the soil analyses of samples BHGLSWMU1924-03, BHGLSWMU1925-03, BHGLSWMU1926-03, BHGLSWMU1926-04 (original analysis only), and BHGLSWMU1927-04. The only analyte analyses associated with this CCV are for BTEX, acrylonitrile, acetone, MEK, and MIBK. SPCCs, CCCs, and target compounds met criteria, with the exception of acetone. The acceptance criterion for this compound is advisory only. No qualification necessary.

pp. 798-790. This continuing calibration is associated with the soil analysis of sample BHGLSWMU1919-04. The only analyte analysis associated with this CCV is acetone SPCCs, CCCs, and acetone met criteria. No qualification necessary. pp. 805-807: This continuing calibration is associated with the diluted soil analysis of sample BHGLSWMU1926-04. The only analyte analysis associated with this CCV is toluene. SPCCs and CCCs (toluene is a CCC) met criteria. No qualification necessary.

<u>Surrogates</u> - The original and diluted analysis of sample BHGLSWMU1926-04 and the analysis of sample BHGLSWMU1927-04 had one or more surrogate recoveries above the UCL. All detections associated with these sample analyses should be J qualified.

<u>Laboratory Control Samples</u> - For the LCS associated batch 30381, the %R was above the UCL for bromomethane and chloroethane. The results for these compounds have already been rejected in this batch and no additional qualification is necessary. All %R results for the LCSs associated with batches 30662, 30845, 30861, and 30871 met established control limits. No qualification necessary.

Note: The LCS associated with the equipment blank and the trip blank (batch 30789) and some QC samples (30836) do not require review.

MS/MSD - A matrix spike/matrix spike duplicate was performed on the soil fraction of sample BHGLSWMU1919-04, abd a matrix spike (no MSD) was performed on the SPLP fraction of sample BHGLSWMU1925-03. All recoveries and RPD were in control. No qualification necessary.

Internal Standard Performance - All internal standards met area and retention time criteria with the exception of the original analysis of sample BHGLSWMU1926-04. All internal standard areas were below the 50% acceptance limit for this analysis. The detection of benzene should be J qualified in this sample.

<u>Method Blanks</u> - All method blanks and extraction blanks were free from contamination No qualification necessary

Note: The method blanks associated with the equipment blank and the trip blank (batch 30789) and some QC samples (30836) do not require review

 $\underline{\text{Trip Blanks}}$  - Trip blank TB08201 contained 1 µg/L methylene chloride, and equipment blank EB082101 contained 19 µg/L acetone. These detections caused action levels of 5 µg/kg for methylene chloride and 95 µg/kg for acetone. All associated detections of the affected compounds that are below the action level should be qualified U as artifacts.

Field <u>Duplicates</u> - No field duplicate was submitted with this data package. No qualification is necessary.

<u>Compound Quantitation</u> - No discrepancies noted Some compounds are reported from secondary dilutions with appropriate adjustment to MDLs and RLs.

#### Qualification Summary Table

Note - The laboratory provides informational codes in a column in the report page called flags. Those codes are removed and replaced with the appropriate qualifier.

Sample ID	Analyte	Lab Val	Lab Qual	HGL Val	HGL Qual
BHGLAOC1908-01	Chloromethane	1	U	1	R
	Bromomethane	3	U	3	R _
	Chloroethane	2	U	2	R

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Sample ID	Analyte	Lab Val	Lab Qual	HGL Val	HGL Qual
	Acetone	8	_	8	U
BHGLAOC1908-02	Chioromethane	0 9	U	0.9	R
	Bromomethane	3	U	3	R
	Chloroethane	1	U	1	R
BHGLAOC1908-03	Chloromethane	0 9	U	09	R
	Bromomethane	3	U	3	R
	Chloroethane	1	U	1	R
BHGLSWMU1919-03	No qualification necessary		•	•	<u> </u>
BHGLSWMU1919-04	No qualification necessary	-		_	<u> </u>
BHGLSWMU1924-03	Acetone	6	_	6	U
BHGLSWMU1925-03	No qualification necessary			-	
BHGLSWMU1926-03	No qualification necessary				
BHGLSWMU1926-04	Benzene	52		52	J
	Toluene (original result)*	value	Е	value	EX
	Toluene (diluted result)	8200		8200	J
BHGLSWMU1927-04	No qualification necessary				

<sup>\*</sup> This result is not reported on the hardcopy.

# Appendix IX SVOCs . SW8270C USEPA Level III Review

Site Naval Air Station Fort Worth JRB, Texas

SDG #: 205132

Laboratory: STL-Chicago

Date. 11.28.01

HydroGeoLogic, Inc. Reviewer. Ken Rapuano

Project Number: AFC001-26CC

Client Sample ID	Laboratory Sample ID	Batch	Matrix
BHGLSWMU1923-03*	205132-1	33924 & 33925	Soil & Extract
BHGLSWMU1923-04*	205132-2	33924 & 33925	Soil & Extract
BHGLSWMU1928-03*	205132-3	33924 & 33925	Soil & Extract
BHGLSWMU1928-06*	205132-6	33924 & 33925	Soil & Extract
BHGLSWMU1929-01	205132-8	33924	Soil
BHGLSWMU1929-02	205132-9	33924	Soil
BHGLSWMU1929-03	205132-10	33924	Soil
BHGLSWMU1929-04	205132-11	33924	Soil
DUP006	205132-12	33924	Soil
BHGLAOC1909-02**	205132-14	33924	Soil
BHGLAOC1910-01**	205132-15	33924	Soil
BHGLAOC1910-02**	205132-16	33924	Soil
BHGLAOC1910-03**	205132-17	33924	Soil
EB082201	205132-18	33926	Water

<sup>\*</sup> Analyzed only for a sample-specific abbreviated list of SVOCs.

<u>Sample Delivery and Condition</u> - The samples arrived at the laboratory in acceptable condition and temperature. The chain of custody did not specify analyses for the equipment blank. The laboratory correctly analyzed this blank for Appendix IX SVOCs Proper custody (internal and external) was documented No qualification required.

<u>Holding Times</u> - All samples were extracted and analyzed within the required holding times for soil samples. No qualification required.

GC/MS Tuning - All DFTPP tunes associated with initial and continuing calibrations were in control. No qualification necessary.

<sup>\*\*</sup> The chain of custody request for "SVOCs/PAHs" is ambiguous; the laboratory provided a full-suite of Appendix IX analyses.

<u>Initial Calibration</u> - 07.27.01 and 09 07 01: This ICal is associated with all SPLP analyses in this SDG The only target analyte is bis(2-ethylhexyl)phthalate. All SPCC mean RRFs were above 0 050 (the hexachlorocyclopentadiene mean RRF was calculated to be 0.364) and all CCC %RSDs were less than 30%. The average %RSD for all analytes was below 15%; the B2EHP %RSD was <30%. No qualification necessary.

07.27.01 and 09 21.01. This ICal is associated with all soil sample analyses in this SDG. All SPCC mean RRFs were above 0.050 and all CCC %RSDs were less than 30%. The average %RSD for all analytes was below 15%; all compound %RSDs were <30%, with the exceptions of 1,2-dichlorobenzene and 4-nitroquinoline-1-oxide. All associated results for these two compounds are rejected and qualified R.

Continuing Calibration - 09.11 01 This CCV is associated with all SPLP analyses in this SDG. The only target analyte is bis(2-ethylhexyl)phthalate. All SPCC RRFs were above 0.050 and all CCC %Ds were less than 20%. The B2EHP %D was <25%. No qualification necessary.

09 24 01. This CCV is only associated with the equipment blank and was not reviewed.

10.03.01. This CCV is associated with all soil samples in this SDG. All CCC %Ds and SPCC RRFs are in control. The CCV had the %Ds within the 25% (30% for selected compounds) control limit for all compounds (50% for those compounds listed in Appendix A), with the exceptions of the %Ds for benzoic acid and benzo[k]anthracene. All associated results for these compounds are rejected and are qualified R.

<u>Surrogates</u> - The SPLP extracts of samples BHGLSWMU1923-04, BHGLSWMU1928-03, and BHGLSWMU1928-06 had a %R for base/neutral surrogate terphenyl-*d14* below the LCL but above 10% (the SPLP extract of BHGLSWMU1923-04 also had a %R for the acid surrogate 2-fluorophenol) No qualification is necessary, as two surrogates are in control for each fraction. All surrogate %Rs were in control for environmental soil samples. No qualification necessary.

<u>Laboratory Control Samples</u> - The LCSs associated with the analytical results for all soil samples and SPLP extracts are in control for all compounds. No qualification is necessary.

MS/MSD - A matrix spike/matrix spike duplicate was performed on sample BHGLAOC1910-01 All %Rs and RPDs were in control, with the exceptions of low %Rs for 2,4-dimethylphenol, 4-chloroaniline, 4-nitrophenol, pentachlorophenol, 3, 3'-dichlorobenzidine in the MS and/or MSD. There were no detections of these compounds in the parent sample, and these compounds should be qualified UJ. There were several compounds with %Rs above the UCL and/or RPDs greater than the precision control limit. There were no detections of the affected compounds in the parent sample and no qualification is necessary

Internal Standards - Each sample had all six ISs in control for retention time and peak area. No qualification necessary.

<u>Method Blanks</u> - The method blanks associated with samples in this SDG were free from contamination No qualification is necessary.

<u>Field Blanks</u> - The equipment blank, EB082201, associated with the samples was free from contamination and no qualification is necessary

<u>Field Duplicates</u> - Sample DUP006 is a field duplicate of sample BHGLSWMU1929-02. There are no detections of target compounds in either member of this duplicate pair. No qualification is necessary

#### Compound Quantitation - Compounds detected below the PQL are reported qualified F.

#### Qualification Summary Table

Sample ID	Analyte	Lab Val	Lab Qual	HGL Val	HGL Qual
BHGLSWMU1923-03 (soil and SPLP)	No qualification necessary				
BHGLSWMU1923-04 (soil and SPLP)	No qualification necessary				
BHGLSWMU1928-03 (soil and SPLP)	No qualification necessary	No qualification necessary			
BHGLSWMU1928-06 (soil and SPLP)	No qualification necessary				
BHGLSWMU1929-01	1,2-Dichlorobenzene	97	U	97	R
	Benzoic acid	190	U	190	R
	Benzo[k]anthracene	130	U	130	R
	4-Nitroquinoline-1-oxide	1600	U	1600	R
BHGLSWMU1929-02	1,2-Dichlorobenzene	96	U	96	R
	Benzoic acid	190	U	190	R
	Benzo[k]anthracene	130	U	130	R
	4-Nitroquinoline-1-oxide	1500	U	1500	R
BHGLSWMU1929-03	1,2-Dichlorobenzene	100	U	100	R
	Benzoic acid	210	U	210	R
	Benzo[k]anthracene	140	U	140	R
	4-Nitroquinoline-1-oxide	1700	U	1700	R
BHGLSWMU1929-04	1,2-Dichlorobenzene	98	U	98	R
	Benzoic acid	190	U	190	R
	Benzo[k]anthracene	130	U	130	R
-	4-Nitroquinoline-1-oxide	1600	U	1600	R
DUP006	1,2-Dichlorobenzene	98	U	98	R
	Benzoic acid	190	U	190	R
	Benzo[k]anthracene	130	U	130	R
	4-Nitroquinoline-1-oxide	1600	U	1600	R

Sample ID	Analyte	Lab Val	Lab Qual	HGL Val	HGL Qual
BHGLAOC1909-02	1,2-Dichlorobenzene	90	U	90	R
	Benzoic acıd	180	U	180	R
	Benzo[k]anthracene	120	U	120	R
	4-Nitroquinoline-1-oxide	1400	U	1400	R
BHGLAOC1910-01	1,2-Dichlorobenzene	96	U	96	R
	Benzoic acid	190	U	190	R
	2,4-Dimethylphenol	250	U	250	υJ
	4-Chloroanliline	140	U	140	บง
	4-Nitrophenol	410	U	410	UJ
	Pentachlorophenol	210	U	210	ΠΊ
	3,3'-Dichlorobenzidine	130	U	130	UJ
	Benzo[k]anthracene	130	υ	130	R
	4-Nıtroquinoline-1-oxide	1500	U	1500	R
BHGLAOC1910-02	1,2-Dichlorobenzene	93	U	93	R
	Benzoic acid	180	U	180	R
	Benzo[k]anthracene	120	U	120	R
	4-Nıtroquinoline-1-oxide	1500	U	1500	R
BHGLAOC1910-03	1,2-Dichlorobenzene	100	U	100	R
	Benzoic acid	200	U	200	R
	Benzo[k]anthracene	140	U	140	R
	4-Nitroquinoline-1-oxide	1600	U	1600	R

#### Appendix IX SVOCs SW8270C USEPA Level III Review

Site: Naval Air Station Fort Worth JRB, Texas

SDG#, 207066

Laboratory. STL-Chicago

Date: 1.11.02

HydroGeoLogic, Inc. Reviewer. Ken Rapuano

Project: AFC001-26CC (AFC01-026-10)

Client Sample ID	Laboratory Sample ID	Matrix
EB120501	207066-2	Water
BHGLAOC1911-02 <sup>†</sup>	207066-3	Soil
BHGLAOC1912-02	207066-6	Soil
BHGLAOC1912-03	207066-7	Soil
DUP02*	207066-8	Soll
DUP03*	207066-9	Soil
DUP04	207066-10	Soil
BHGLSWMU1935-02*	207066-11	Soil
BHGLSWMU1936-02*	207066-13	Soil
BHGLSWMU1936-03*	207066-14	Soil

<sup>&</sup>lt;sup>†</sup> Mis-identified on the chain of custody. The correct sample ID is BHGLAOC1911-03.

<u>Sample Delivery and Condition</u> - The samples arrived at the laboratory in acceptable condition and temperature Proper custody (internal and external) was documented. No qualification required.

<u>Holding Times</u> - All samples were extracted and analyzed within the required holding times for soil samples. No qualification necessary.

<u>GC/MS Tuning</u> - All DFTPP tunes associated with initial and continuing calibrations were in control No qualification necessary.

Initial Calibration - 12 17.01 and 1.2.02 All SPCC mean RRFs were above 0.050 and all CCC %RSDs were less than 30%. The average %RSD for all analytes was below 15%; all compound %RSDs were <30%. Those compounds calibrated to a linear relationship or curve had  $r^2$  values > 0.990.

<u>Continuing Calibration</u> - The continuing CCV associated with the samples in this SDG had all CCC %Ds and SPCC RRFs in control. The CCV had the %Ds within the 25% (30% for selected compounds) control limit for all compounds listed in Section 7 of the QAPP The %Ds were all less than 50% for those compounds listed in Appendix A of the QAPP. No qualification necessary

<sup>\*</sup> Analyzed only for a sample-specific abbreviated list of SVOCs

724 461

<u>Surrogates</u> - All surrogate recoveries were in control Note that the samples from SWMU 19 (including DUP02 and DUP03) were not analyzed for the acid fraction and only base/neutral surrogates are reported for these samples No qualification is necessary

<u>Laboratory Control Samples</u> - The LCSs associated with the analytical results for all samples are in control for all compounds, with the exception of a high %R for di-n-octyl phthalate. All associated results for this compound are non-detects and no qualification is necessary.

MS/MSD - A matrix spike/matrix spike duplicate was performed on sample BHGLAOC1912-02. All %Rs and RPDs were in control. No qualification necessary.

<u>Internal Standards</u> - Each sample had all six ISs in control for retention time and peak area. No qualification necessary.

<u>Method Blanks</u> - The method blank associated with samples in this SDG was free from contamination. No qualification is necessary.

<u>Field Blanks</u> - The equipment blank, EB120501, associated with the samples was free from contamination and no qualification is necessary

<u>Field Duplicates</u> - There are three parent sample/field duplicate pairs in this SDG. BHGLSWMU1935-02/DUP02, BHGLSWMU1936-02/DUP03, and BHGLAOC1911-02/DUP04. There were no target compound detections in either member of duplicate pairs BHGLSWMU1935-02/DUP02 and BHGLSWMU1936-02/DUP03. No qualification is necessary

Duplicate pair BHGLAOC1911-02/DUP04 had multiple detections, which are compared in the table below

Analyte	BHGLAOC1911-02	DUP04	RPD	Acceptable?
Naphthalene	82 F	75 U	NA	Yes
Acenaphthene	130 F	62 U	NA	Yes
Fluorene	270 F	170 F	NA	Yes
Phenanthrene	1600	550	98	No
Anthracene	230 F	86 U	NA	Yes
Fluoranthene	2100	1100	63	No
Pyrene	1300	1200	8	Yes
Benzo[a]anthracene	650	640	2	Yes
Chrysene	740	720	3	Yes
bis(2-Ethylhexyl)phthalate	130 U	160 F	NA	Yes
Benzo[b]fluoranthene	670	910	30	Yes
Benzo[k]fluoranthene	470	620	28	Yes
Benzo[a]pyrene	580	820	34	No
Indeno[1,2,3-cd]pyrene	310 F	500	NA	No
Dibenzo[a,h]anthracene	130 U	170 F	NA	Yes
Benzo[g,h,ı]perylene	300 F	520	NA	No

Where unacceptable precision was found, the affected results are qualified J in each member of the duplicate pair (those data points qualified F retain this qualifier).

Compound Quantitation - Compounds detected below the PQL are reported qualified F.

**Qualification Summary Table** 

Note - The laboratory provides informational codes in a column in the report page called flags. Those codes are removed and replaced with the appropriate qualifier

Sample ID	Analyte	Lab Val	Lab Qual	HGL Val	HGL Qual
BHGLAOC1911-02	Phenanthrene	1600		1600	J
(the correct sample ID is BHGLAOC1911-03)	Fluoranthene	2100	_	2100	J
	Benzo[a]pyrene	580		580	J
BHGLAOC1912-02	No qualification necessary				
BHGLAOC1912-03	No qualification necessary				
DUP02	No qualification necessary.				
DUP03	No qualification necessary.				
DUP04	Phenanthrene	550		550	J
	Fluoranthene	1100		1100	J
	Benzo[a]pyrene	820		820	J_
	Indeno[1,2,3-cd]pyrene	500	-	500	J
	Benzo[g,h,ı]perylene	520		520	J
BHGLSWMU1935-02	No qualification necessary				
BHGLSWMU1936-02	No qualification necessary				
BHGLSWMU1936-03	No qualification necessary.				

#### **Selected Volatile Organic Compounds**

SW-846 Method 8260B USEPA Level III Review

Site: NAS Fort Worth JRB SDG#: 207066

Laboratory: STL-Chicago Date 1.11.02

HydroGeoLogic, Inc. Reviewer. Ken Rapuano Project. AFC001-26CC (AFC01-026-10)

Client Sample ID	Laboratory Sample ID	LCS/Method Blank Batch	Matrix
TB120501*	207066-1	40893	Water
EB120501*	207066-2	40893	Water
BHGLAOC1913-02	207066-4	42265	Soil
BHGLAOC1913-03	207066-5	42275	Soil
DUP02	207066-8	42275	Soil
DUP03	207066-9	42275	Soil
BHGLSWMU1935-02	207066-11	42275	Soil
BHGLSWMU1935-03	207066-12	42275	Soil
BHGLSWMU1936-02	207066-13	42275	Soil
BHGLSWMU1936-03	207066-14	42268 (med/high level)	Soil

<sup>\*</sup> Analyzed for the full Appendix IX list of VOCs

<u>Sample Delivery and Condition</u> - The samples arrived at the laboratory in acceptable condition and temperature, and properly preserved. Proper custody was documented. No qualification is necessary.

<u>Holding Times</u> - All samples were analyzed within the required holding time for soil samples and no qualification is necessary.

<u>GC/MS Tuning</u> - The initial calibration and sample analytical sequences were all preformed within 12 hours of an acceptable MS tune, with one exception. A laboratory standard labeled 'ICALSPIKE' was injected 19 hours and 5 minutes after the BFB tuning standard run on instrument GCL7. In the judgment of the validator, this is a minor discrepancy and no qualification is required.

<u>Initial Calibration</u> - Two ICal runs are reported in this data package. The QC issues associated with each one are discussed below:

pp. 93-105. This initial calibration is associated with the trip and equipment blanks, and no qualification is performed based on this calibration.

pp. 248-260: This initial calibration is associated with the soil analysis of sample BHGLSWMU1936 -03. Not all target analytes are included on the Form VI summary, and the raw calibration data were used to evaluate data. This calibration had acceptable average RRFs for all SPCCs and %RSDs for all CCCs. The mean %RSD for all analytes was below 15%, all target compound %RSDs were <30%. One target compound, acetone, had a %RSD >15% and was quantified using a calibration curve. The calibration curve was found

to have  $r^2<0.990$ ; the laboratory re-evaluated the calibration data, but was not able to fit a curve with  $r^2>0.990$ . The corresponding acetone result is rejected and qualified R.

pp. 352-364. This initial calibration is associated with all soil sample analyses in this SDG except BHGLSWMU1936-03. This calibration had acceptable average RRFs for all SPCCs and %RSDs for all CCCs. The mean %RSD for all analytes was below 15%; all target compound %RSDs were below 30%. One target compound, acetone, had a %RSD >15% and was quantified using a calibration curve. The original calibration curve was found to have r 2<0.990; the laboratory re-evaluated the calibration data and was able to achieve r2>0.990 by changing the form of the curve. The laboratory submitted revised acetone data and no qualification is necessary.

Continuing Calibration - Each CCV was evaluated for SPCC RRFs, CCC %Ds, and target analyte %Ds<25% Compounds listed in Appendix A of the QAPP have an advisory %D requirement of 50%, with no qualification or corrective action if this requirement is not met.

pp 420-422: This continuing calibration is associated with the soil analyses of sample BHGLSWMU1936-03 All SPCCs, CCCs, and target compounds met criteria and no qualification is necessary

pp. 429-431 This initial calibration is associated with all soil sample analyses with the exceptions of BHGLAOC1913-02 and BHGLSWMU1936-03 All SPCCs, CCCs, and target compounds met criteria and no qualification is necessary.

pp. 436-438: This initial calibration is associated with the soil sample analysis of BHGLAOC1913-02. All SPCCs, CCCs, and target compounds met criteria and no qualification is necessary.

<u>Surrogates</u> - All samples in this SDG showed acceptable surrogate recoveries with one exception. Sample BHGLSWMU1936-03 had two surrogate recoveries above the UCL. The sample was reanalyzed with similar results. The laboratory reported only the 'best' analysis for this sample. All detections associated with this sample analysis should be J qualified.

<u>Laboratory Control Samples</u> - All %R results for the LCSs associated with batches 42265, 42268, and 4227 5 met established control limits. No qualification necessary.

Note: The LCS associated with the equipment blank and the trip blank (batch 40893) does not require review.

<u>MS/MSD</u> - No matrix spike/matrix spike duplicate was performed on the soil samples in this SDG No qualification necessary.

Internal Standard Performance - All internal standards met area and retention time cnteria with the exception of the reported analysis of sample BHGLAOC1913-02. The area of internal standard 1,4-dichlorobenzene-d4 was below the 50% acceptance limit for this analysis. The only analyte requested for this sample is trichloroethene, which is not quantified using this IS. No qualification is necessary

<u>Method Blanks</u> - All method blanks and extraction blanks were free from contamination. No qualification necessary.

Note: The method blanks associated with the equipment blank and the trip blank (batch 40893) does not require review.

 $\underline{\text{Trip Blanks}}$  -  $\underline{\text{Trip blank TB120501}}$  was free from contamination, equipment blank EB120501 contained 1  $\mu\text{g/L}$  methylene chloride. This compound is not a requested analyte for any sample in this SDG and no qualification is necessary

<u>Field Duplicates</u> - DUP02 is a field duplicate of sample BHGLSWMU1935-02, DUP03 is a field duplicate of sample BHGLSWMU1936-02. All results in the DUP03/BHGLSWMU1936-02 pair met precision criteria. No target compounds were detected in the DUP02/BHGLSWMU1935-02 pair. No qualification necessary.

Compound Quantitation - No discrepancies noted. Sample BHGLSWMU1936-03 was analyzed using the medium/high level method with methanol dilution due to high levels of non-target compounds present in the sample. This resulted in the MDLs and reporting limits for this sample to be elevated by a factor of approximately 20 fold. Sample BHGLAOC1913-02 was submitted without sufficient volume for the laboratory to determine the percent solids in the sample and calculate a dry weight correction for the wet weight results. The results for this sample are biased low, possibly by as much as 35% (assuming approximately 75% solids), and the result is qualified with a J

#### Qualification Summary Table

Note - The laboratory provides informational codes in a column in the report page called flags. Those codes are removed and replaced with the appropriate qualifier

Sample ID	Analyte	Lab Val	Lab Qual	HGL Val	HGL Qual
BHGLAOC1913-02	Trichloroethene	51	-	51	J
BHGLAOC1913-03	No qualification necessary			<del>-</del>	
DUP02	No qualification necessary				
DUP03	No qualification necessary				-
BHGLSWMU1935-02	No qualification necessary				
BHGLSWMU1935-03	No qualification necessary				<del></del>
BHGLSWMU1936-02	No qualification necessary				
BHGLSWMU1936-03	Acetone	28	U	28	R

# TAB

APPENDIX H

# APPENDIX H METES AND BOUNDS

#### STATE OF TEXAS TARRANT COUNTY

# INDUSTRIAL SOLID WASTE CERTIFICATION OF CLOSURE/REMEDIATION AREA OF CONCERN 19

#### KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Natural Resource Conservation Commission (TNRCC) pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed Records of Tarrant County, Texas in compliance with the recordation requirements of said rules:

I

The Department of the Air Force has performed closure/remediation of the land described herein. A copy of the Notice of Registration No. 65004, including a description of the facility, is attached hereto and is made part of this filing. A list of the known waste constituents, including known concentrations in soil, which have been left in place is attached hereto and is made part of this filing. Further information concerning this matter may be found by an examination of company records or in the Notice of Registration No. 65004 files, which are available for inspection upon request at the central office of the TNRCC in Austin, Texas.

The TNRCC derives its authority to review the closure/remediation of this tract of land from the Texas Solid Waste Disposal Act, § 361.002, Texas Health and Safety Code, Chapter 361, which enables the TNRCC to promulgate closure and remediation standards to safeguard the health, welfare and physical property of the people of the State and to protect the environment by controlling the management of solid waste. In addition, pursuant to the Texas Water Code, § 5.012 and § 5.013, Texas Water Code, Annotated, Chapter 5, the TNRCC is given primary responsibility for implementing the laws of the State of Texas relating to water and shall adopt any rules necessary to carry out its powers and duties under the Texas Water Code. In accordance with this authority, the TNRCC requires certain persons to provide certification and/or recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This deed certification is not a representation or warranty by the TNRCC of the suitability of this land for any purpose, nor does it constitute any guarantee by the TNRCC that the remediation standards specified in this certification have been met by the Department of the Air Force.

#### Parcel "B-1"

Being a tract of land situated in the John M. Shreeve Survey, Abstract No. 1456 within the Naval Air Station Fort Worth Joint Reserve Base (formerly known as Carswell Air Force Base), Tarrant County, Texas, said tract of land also being a portion of a boundary resurvey prepared by Baird, Hampton & Brown, Inc. of Fort Worth, Texas, dated January 14, 1998 and filed with the Air Force Base Conversion Agency and Westworth Redevelopment Authority, said tract of land being described by metes and bounds as follows:

BEGINNING at a set 5/8 inch capped iron rod stamped "BHB INC" having a State Plane Coordinate (North Central Zone, NAD 83) of Northing: 6963043.31; Easting: 2296164.36, for the northeast and beginning corner of tract being described, from which a 5/8 inch aluminum capped iron rod found stamped "N-13" at the Point of Beginning of the area labeled "ENVIRONMENTAL AREA" on said resurvey, bears north 48 degrees 59 minutes 47 seconds west, a distance of 108.32 feet and a 5/8 inch aluminum capped iron rod found stamped "N-12", shown on the West line of said "ENVIRONMENTAL AREA" of said boundary resurvey, bears south 07 degrees 02 minutes 26 seconds west, a distance of 685.13 feet; thence south 00 degrees 12 minutes 09 seconds east, a distance of 283.38 feet to a 5/8" capped iron rod set marked "BHB INC"; thence south 84 degrees 23 minutes 22 seconds west, a distance of 346.98 feet to a 5/8" capped iron rod set marked "BHB INC"; thence north 19 degrees 26 minutes 29 seconds east, a distance of 336.44 feet to a 5/8" capped iron rod set marked "BHB INC"; thence north 89 degrees 59 minutes 17 seconds east, a distance of 232.33 feet to the point of beginning and containing 85798 square feet or 1.969 acres more or less, as surveyed by Steven W. Hughes, Registered Professional Land Surveyor during the month of 2002.

The basis of bearings for this description is the NAD 83 (1986) State Plane Coordinate System for North Central Texas, Zone 4202, US Feet. All bearings shown are based on grid bearings. All distances shown are ground distances in US Feet Parcel "B-1" is depicted in Exhibit "B-1".

#### Parcel "B-2"

Being a tract of land situated in the John M. Shreeve Survey, Abstract No. 1456 within the Naval Air Station Fort Worth Joint Reserve Base (formerly known as Carswell Air Force Base), Tarrant County, Texas, said tract of land also being a portion of a boundary resurvey prepared by Baird, Hampton & Brown, Inc. of Fort Worth, Texas, dated January 14, 1998 and filed with the Air Force Base Conversion Agency and Westworth Redevelopment Authority, said tract of land being described by metes and bounds as follows:

BEGINNING at a set 5/8 inch capped iron rod stamped "BHB INC" having a State Plane Coordinate (North Central Zone, NAD 83) of Northing: 6963113.19; Easting: 2296037.66, for the northeast and beginning corner of tract being described, from which a 5/8 inch aluminum capped iron rod found stamped "N-13" at the Point of Beginning of the area labeled

"ENVIRONMENTAL AREA" on said resurvey, bears north 88 degrees 29 minutes 25 seconds east, a distance of 44.97 feet and a 5/8 inch aluminum capped iron rod found stamped "N-12", shown on the West line of said "ENVIRONMENTAL AREA" of said boundary resurvey, bears south 03 degrees 15 minutes 44 seconds east, a distance of 751.07 feet; thence south 20 degrees 34 minutes 00 seconds west, a distance of 71.80 feet to a 5/8" capped iron rod set marked "BHB INC"; thence north 88 degrees 11 minutes 49 seconds west, a distance of 23.36 feet to a 5/8" capped iron rod set marked "BHB INC"; thence north 19 degrees 30 minutes 05 seconds west, a distance of 35.46 feet to a 5/8" capped iron rod set marked "BHB INC"; thence north 61 degrees 18 minutes 42 seconds east, a distance of 68.87 feet to the point of beginning and containing 1999 square feet or 0.045 of an acre more or less, as surveyed by Steven W. Hughes, Registered Professional Land Surveyor during the month of 2002.

The basis of bearings for this description is the NAD 83 (1986) State Plane Coordinate System for North Central Texas, Zone 4202, US Feet. All bearings shown are based on grid bearings. All distances shown are ground distances in US Feet. Parcel "B-2" is depicted in Exhibit "B-2".

Volatile Organic Compound (VOC) contaminated soil in Parcel "B-1" and Semi-volatile Organic Compound (SVOC) contaminated soil in Parcel "B-2" meets non-residential (i.e., industrial/commercial) criteria, in accordance with the TNRCC's requirements in 30 Texas Administrative Code, §335.555, which mandates that the closure/remedy be designed to eliminate substantial present and future risk such that no post-closure care or engineering or institutional control measures are required to protect human health and the environment. Future land use is considered suitable for non-residential (i.e., industrial/commercial) purposes in accordance with risk reduction standards applicable at the time of this filing. Future land use is intended to be non-residential.

In accordance with the requirements for Standard 2 cleanups where the closure/remedy is based upon non-residential soil criteria, the current owner has undertaken actions as necessary to protect human health or the environment in accordance with the rules of the TNRCC.

#### Maximum Concentrations of Soil Contaminants Left in Place Area of Concern 19

Analytical Method	Analyte	Maximum Concentration (mg/kg)
	VOCs	
SW8260B	Trichloroethene	0.051 J
	SVOCs	
SW8270C	Anthracene	0.38
SW8270C	Benzo(a)anthracene	2
SW8270C	Benzo(a)pyrene	1.8
SW8270C	Benzo(b)fluoranthene	2.2
SW8270C	Benzo(g,h,i)perylene	1.3
SW8270C	Benzo(k)fluoranthene	1.4
SW8270C	bis(2-Ethylhexyl)phthalate	0.66
SW8270C	Chrysene	2
SW8270C	Dibenz(a,h)anthracene	0.43
SW8270C	Fluoranthene	3.5
SW8270C	Indeno(1,2,3-c,d)pyrene	1.1
SW8270C	Phenanthrene	2.1
SW8270C	Pyrene	3.6

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#### STATE OF TEXAS TARRANT COUNTY

The owner of the site is Department of the Air Force, and its address is Headquarters Air Force Center of Environmental Excellence (AFCEE)/Environmental Restoration Division (ERD), 3207 Sidney Brooks, Brooks Air Force Base, Texas 78235-5363

EXECUTED this the _26th day of _ April	, 2002.
	Department of the Air Force
	Michael R Dody
	Michael R. Dodyk, P.E. Environmental Restoration Team Chief
BEFORE ME, on this the 26th day of April Dodyk, Environmental Restoration Team Chief, A United States Air Force, known to me to be the whose name is subscribed to the foregoing ins executed the same for the purposes and in the cap GIVEN UNDER MY HAND AND SEAL OF OF	Air Force Center for Environmental Excellence, a person and agent of said government agency strument, and he acknowledged to me that he sacity therein expressed.
Notary Public in and for the State of Texas, of	TarrantCounty
BILLY VAN-DEREN MY COMMISSION EXPRES May 6, 2003	6 May 2003  My Commission Expires

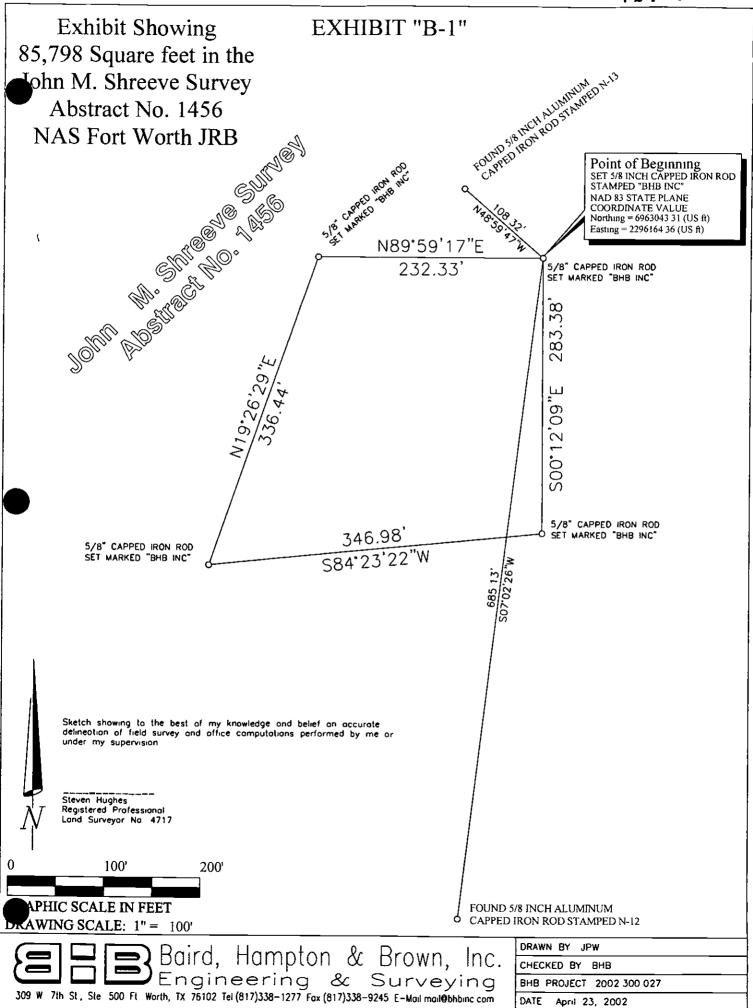
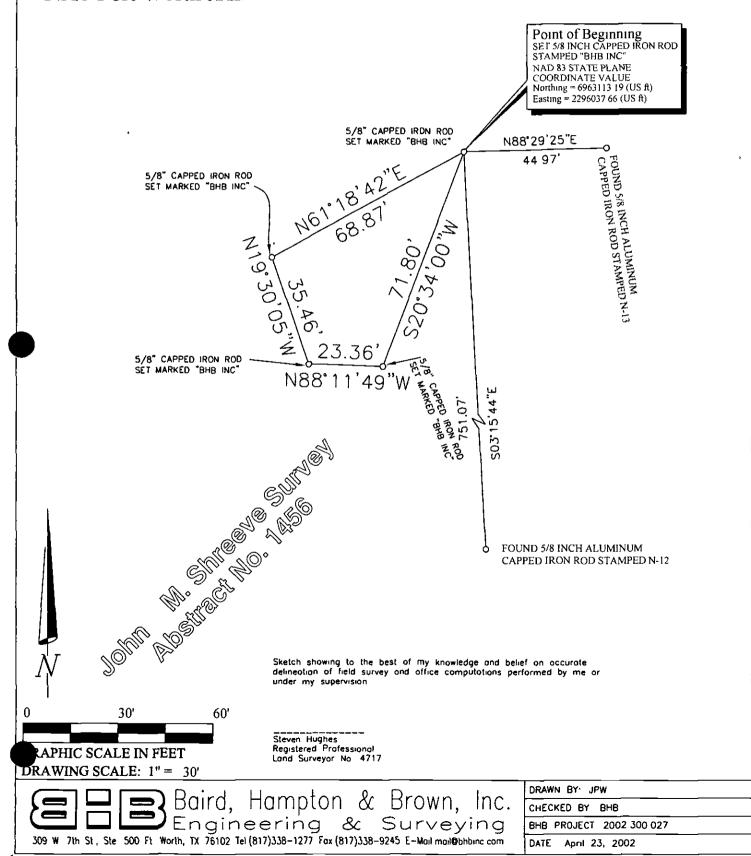


Exhibit Showing
1,999 Square feet in the
John M. Shreeve Survey
Abstract No. 1456
NAS Fort Worth JRB

#### EXHIBIT "B-2"



## FINAL PAGE

### **ADMINISTRATIVE RECORD**

FINAL PAGE